

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

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Revision on Concept 1.3

Light and Sight

1 Definitions

Light	It is the visible form of energy that travels in the form of waves.
Light source	It is the object that emits its own light.
Sun	It is the natural source of light.
Moon	It is the shiny object in the sky that reflects the sunlight falling on it.
Eye	It is the organ that is affected by light and is responsible for sight.
Night vision goggles	It is a tool used by humans to see objects through the dark.
Eye pupil	It controls the amount of light that enters the eye.
Fishing cat	It is a wild cat that has eyes glow at night.
Transparent materials	They are materials that allow light to pass through them.
Opaque materials	They are materials that don't allow light to pass through them.
Smooth materials	They are materials that reflect the light rays in one direction.
Rough materials	They are materials that diffuse the light rays in different directions.
Light reflection	It is the bouncing of light rays when it falls on a reflecting surface.
Shadow	It is a dark area that is formed when light falls on an opaque object.

Fireflies	They are a kind of beetles that light up their wings to communicate.
Code	It is a pattern that has a meaning.
Language	It is a code in the form of sounds.
Writing	It is a code in the form of symbols or arranged letters.

2 Give a reason for:

- ①  **The fishing cat's eyes seem to glow in the dark.**
 - Because it has a mirror-like membrane on the back of its eyes which reflects the light rays that fall on it.
- ②  **A candle is considered a source of light.**
 - Because it emits its own light.
- ③  **The moon seems shiny, but it is not considered a source of light.**
 - Because the moon reflects the sunlight falling on it.
- ④ **Nocturnal animals can see better than humans at night.**
 - Because nocturnal animals have bigger eyes and their pupils open wider than humans.
- ⑤  **The shadow of an opaque body is formed when light falls on it.**
 - Because the opaque body does not allow light to pass through it.
- ⑥ **You can see an object placed behind a glass window.**
 - Because glass is a transparent material that allows light to pass through.
- ⑦  **Fireflies use different patterns of flashlight to communicate with each other.**
 - To warn off predators or to attract a mate.
- ⑧ **Fireflies produce a chemical reaction inside their bodies.**
 - To light up their bodies and communicate with each other.

3 What happens if:

- ①  **The fishing cats' eyes doesn't have a mirror-like membrane?**
 - Fishing cats will not see well at night.

- ② **The moon cannot reflect light?**
- It becomes dark and we cannot see it at night.
- ③  **Light falls on a transparent object, such as a glass window?**
- Light will pass through the glass window.
- ④  **Light falls on an opaque object, such as a human body?**
- Light will not pass through it and a shadow will be formed.
- ⑤  **Light falls on a smooth surface (a mirror)?**
- Light rays are reflected in the same direction.
- ⑥  **Light falls on a rough surface (wood)?**
- Light rays are diffused in different directions.
- ⑦ **A firefly wants to attract a mate?**
- It produces a chemical reaction inside its body to light up.
- ⑧ **Another group of fireflies flashes nearby?**
- They will stop flashing their own pattern and start to match the pattern of the other fireflies.
- ⑨ **The traffic light becomes red while you are driving the car?**
- The eyes send a message to the brain, then the brain alerts you to stop moving.

4 Summary

- The visibility of objects depends on the amount of light, where:

In a bright place

Humans can see objects **clearly**.

In a dim light place

Humans sees objects **less clearly** and still needs more light.

In the dark

Humans **can't see** anything, so humans depends on other senses, such as touch.

- Humans can use **night vision goggles** to see in the dark.
- Humans need a source of light to see clearly.



Source of Light

It's something that emits (gives off) its own light.

Examples of Light Sources:

The Sun



Electric Lamp



Fire



Flashlight



Candle



- The moon and mirror are not considered sources of light.** 

Because they don't emit (produce) their own light, where:

The moon reflects the sunlight falling on it.

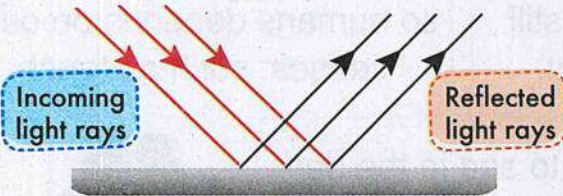
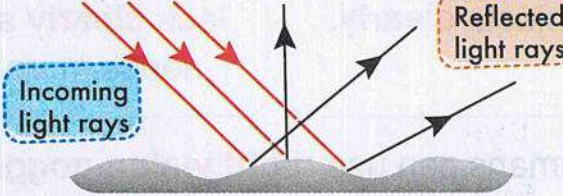


The mirror reflects any light falling on it.



Light Reflection

The light reflection depends on the smoothness of the surface.

Smooth Surface such as a polished mirror	Rough Surface such as a painted surface
	
What happens if:	
• Light falls on a smooth surface? – Light rays would be reflected in one direction with the same angle at which they hit the surface.	• Light falls on a rough surface? – Light rays would be scattered (diffused) in different directions.

Light is a visible form of energy that travels in a **straight line** in the form of **waves**.

Objects are classified into:

Transparent Objects	Opaque Objects
	
• They are the objects that allow light to pass through. • Things can be seen through them. • They don't cast shadows.	• They are the objects that don't allow light to pass through. • Things can't be seen through them. • They cast shadows.
Examples:	
Air – Water – Glass – Lenses – Window	Human body – Wood – Metals

Shadow happens when light falls on an opaque object.



Nocturnal Animals

- Nocturnal animals can see **better than** humans in dim light.

	Human	Nocturnal animal
		
	Pupil	Pupil
Eye Size	Smaller eyes	Bigger eyes
Eye Pupil	Opens narrower	Opens wider

Fishing Cat

- The fishing cat's eyes seem to glow in the dark. **GR**
 - Because it has a **mirror-like membrane** (structural adaptation) at the back of its eyes.
 - This membrane reflects any light entering its eyes.



Codes

- Humans use codes to communicate and transmit information.

Code

It is a pattern that has a meaning.

1 Thumbs-up or Thumbs-down



Thumbs-up means good.



Thumbs-down means bad.

2 Facial Expressions

They are codes that help people predict what we **feel** or **think**.

3 Language

- Language is a code in the form of **sounds** that transfer information.
- Different languages have different codes.

4 Writing

It is a code in the form of **symbols** or **arranged letters** that have a specific meaning.

5 Traffic Lights



Red means "Stop".



Green means "Go".

6 Lighthouses

They encode information in flashes of **light** to tell sailors where they are.

7 Music or Sounds

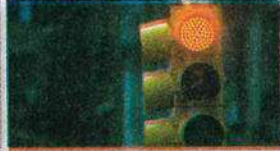
Many musical instruments can be used to transfer information in the form of a code.

Examples of Information that the Eyes Receive:

1 You see your friend waving.



2 A car stops when it sees a red traffic light.



3 Using a rescue flare to get help.



4 Hikers use mirrors that flash to attract the attention of rescue helicopter pilots.



NOTE:

- In the past, humans used **signal fires** to communicate from a distance of many kilometers.
- The brain **decodes** and **interprets** the meaning of the code.

Fireflies

- 1 They live on **mangrove trees** in Thailand.
- 2 They are a type of insect called **winged beetles (not flies)**.
- 3 Fireflies produce a **chemical reaction** inside their bodies that allows them to **light up** to communicate together.
- 4 Fireflies depend on their sense of **sight** to communicate together.



- Fireflies use their wings to make different flash patterns in regular periods of time.
 - To warn other fireflies of predators.
 - To attract a mate to reproduce.



Revision on Concept 2.1

Starting and Stopping

1 Definitions

Static object	It is the object that doesn't change its position.
Moving object	It is the object that changes its position.
Shockwave truck	It is the fastest truck in the world.
Force	It is a push or a pull that is applied on an object to move it.
Pushing force	It is the force you can do to move an object away from you.
Pulling force	It is the force you can do to move an object toward you.
Motion	It is the change of the position of an object relative to a fixed starting point.
Gravity	It is the force that pulls objects down toward the Earth.
Friction	It is the force that arises when two objects rub against each other.
Energy	It is the ability to do work.
Work	It is a force that causes an object to move a distance.

2 Importance

Jet engines in Shockwave truck	They make the Shockwave truck reach speeds more than 500 kilometers per hour.
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Parachutes in shock wave truck	They help the driver to slow down the Shockwave quickly.
Friction	It slows down or stop the moving objects.

3 Give a reason for:

- ① A jet airplane is faster than a normal truck.
 - Because a jet airplane has a more powerful engine than a normal truck.
- ② The Shockwave truck is faster than a normal truck.
 - Because it has three jet engines.
- ③ Engineers use three parachutes in the Shockwave truck designs.
 - To help the driver decrease the speed of the Shockwave truck quickly.
- ④ By increasing the number of fire extinguishers, the cart moves a longer distance.
 - Because by increasing the number of fire extinguishers, the speed of the cart will increase.
- ⑤  The static ball on the ground moves when you kick it.
 - Due to the pushing force of your leg on it.
- ⑥ When two equal pushing forces act on an object in opposite directions, the object does not move.
 - Because the forces that affect the object are balanced, so the object doesn't move.
- ⑦  When you throw a ball up, it returns to the ground.
 - Due to the gravity that pulls the ball down towards the Earth.
- ⑧  When a car crashes into a wall, it will stop moving.
 - Because the wall applied a force to the car that is equal to the force of the moving car but in the opposite direction.
- ⑨ When you stop pedaling during the movement of your bicycle, it slows down until it stops.
 - Due to the friction force between the bicycle tires and the road.

4 What happens if:

- ① You kick a static ball on the ground?
 - The ball will move due to the pushing force of your leg.
- ② The driver of Shockwave truck opens the parachutes?
 - The Shockwave truck slow down gradually until it stops.
- ③  The pulling force of the two teams are equal in the tug-of-war game?
 - The rope will not move.
- ④  The pulling force of the two teams are unbalanced in the tug-of-war game?
 - The rope will move towards the greater force.
- ⑤  You let your book out of your hand?
 - The book will fall down due to the pulling force of gravity.
- ⑥ A car run out of fuel on the flat road?
 - The speed of the car decreases gradually until it stops.
- ⑦ A car and a truck are affected by the same pushing force?
 - The car travels a longer distance than truck.
- ⑧ You push two similar toy cars with different forces?
 - The toy car that is pushed with greater force moves a longer distance than the other toy car.

5 Summary

First

Motion



- An object stays **static** when it doesn't change its position because there is **no force** acting on it.



- An object **moves** when it changes its position because there is a proper **force** acting on it.

Motion

It is the change in an object's position relative to a fixed point.

To move any static object:

1

A pushing or pulling force must act on it.

2

A change in the position happens as time passes.

Some motions are:

easy to see, such as:

A person waling down the street

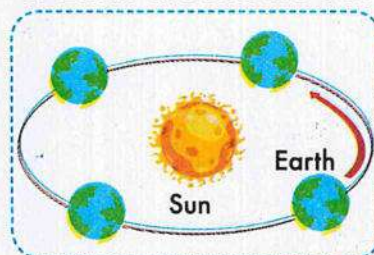


The movement of leaves by the blowing wind



hard to see, such as:

The revolution (movement) of Earth around the sun



Second Force

Force

It is a **push** or a **pull** applied on an object to change its position.

A force can:

1 Move a static object.



2 Stop a moving object.



3 Change an object's speed.



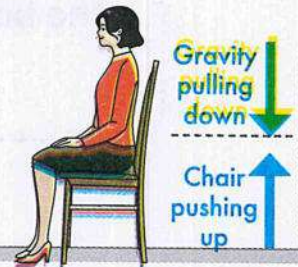
4 Change an object's direction.



The direction of force is determined by the total force applied on the object.

- When you are sitting on a chair, there is no motion. **GR** Because there are two **balanced forces** acting on you, which are:

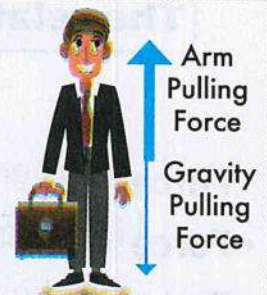
- 1 The **pulling** force of gravity **downward**.
- 2 The **pushing** force of the chair **upward**.



- When you lift a bag, there are two **unbalanced forces** acting on the bag in opposite directions, which are:

- 1 The **pulling** force of your arm **upward**.
- 2 The **pulling** force of gravity **downward**.

So, the bag moves **upward** towards the greater force.



Gravity

It is the force that pulls the objects downward.

The Effect of Force on Motion

- **By increasing the acting force on an object:**
 - It moves a longer distance.
 - Its speed increases, and its kinetic energy increases.
- **By applying the same force on different objects:**
 - The **small car** moves a **long** distance.
 - The **big truck** moves a **short** distance.



The boy who pushes the wall doesn't do any work.
Because the wall doesn't move.



The relationship between energy, work, and force:

- **Force** transfers **energy** from one object to another.
- **Force** is something that changes **energy** so that it can do **work**.
- **Energy** is the ability to do work.
- **Work** is the energy transferred by a force to move an object.

Third Force Types

1 Pulling and pushing forces

Pulling Force

It is a force that you can do to move an object toward you.



Pushing Force

It is a force that you can do to move an object away from you.



2 Balanced and unbalanced forces

In a tug-of-war game, two teams **pull** the rope in **opposite** directions.

Balanced Forces

The rope doesn't move.

- When the forces acting on the rope are **balanced**.



Unbalanced Forces

The rope moves towards the greater force.

- When the forces acting on the rope are **unbalanced**.



3 Wind force

Air force (wind blowing) can move some objects, such as the **tree leaves**.

How did engineers prove that air causes movement?



- Engineers fixed a fire extinguisher onto a static cart.
- When air is released **backward** from the extinguisher, the cart begins to move **forward**.
- By **increasing** the number of fire extinguishers, the speed of the cart **increases**, and it covers a **longer** distance.

Fourth Moving Objects



Shockwave
(World fastest truck)



- A jet engine is much faster than a truck because the jet's engine is much more powerful than the truck's engine.

- It has **three** jet engines.
- Its speed can reach **500** kilometers per hour.
- It is **five times** faster than a normal truck.

How does it move?

It moves by the **pushing** force of its powerful jet engines.

How does it stop? (As a rocket design)

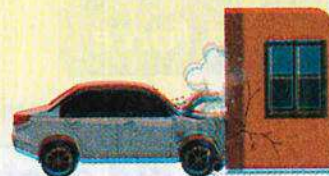
It has **three parachutes** that help the driver to slow down it quickly.

Fifth Stopping Objects

A moving object stops when a force acts on it with the **same amount**, but in the **opposite direction**.

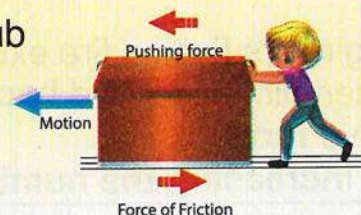
Collision

- When a moving car crashes into a wall, it stops.
- Because the wall applied force to the car in the **same amount** and in the **opposite direction**.



Friction Force

- It is the force that arises when two surfaces rub against each other.
- It acts in the **opposite** direction of the motion.
- It always **slows down** or **stops** the moving object.



Concept 1.3

Lesson 1

Self-Assessment 10

15

1 (A) Put (✓) or (X):

1. Nocturnal animals have larger eyes than humans. ()
2. The human eyes can see in the dark clearly. ()
3. Cats have excellent night vision, while humans don't. ()

(B) Write the scientific term:

1. They are objects that emit their own light. (.....)
2. It is the visible form of energy that enables us to see. (.....)

2 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Eye	(a) can hunt at night due to the bouncing off light energy.
2. Bat	(b) is the organ that is affected by light and responsible for sight.
3. Fishing cat	(c) can hunt at night due to the bouncing off sound energy.

1. 2. 3.

(B) Write the name of the device in the opposite figure, then mention its importance:



3 (A) Choose the correct answer:

1. Animals that have an excellent night vision for hunting, include
 (a) cat and bat (b) owl and jerboa (c) owl and bat (d) owl and cat
2. The pupils of the human eyes open those of the nocturnal animals' eyes.
 (a) wider than (b) similar to (c) narrower than (d) typical to
3. Each of the following is considered a source of light, except the
 (a) fire (b) sun (c) lamp (d) mirror

(B) Give a reason for:

1. Cats' eyes seem to glow in the dark.

2. The moon appears luminous although it is not a source of light.

1 (A) Choose the correct answer:

1. A shadow is formed when light falls on wood because it is material.
 (a) an opaque (b) a smooth (c) a transparent (d) a rough
2. Light rays pass through lenses, so they are made up of
 (a) wood (b) mirror (c) glass (d) metal
3. A mirror reflects light a painted surface.
 (a) better than (b) less than (c) typical to (d) similar to

(B) What happens if:

1. Light rays fall on a shiny, smooth surface like a mirror?

2. You place an opaque object between a light source and a wall?

2 (A) Correct the underlined word:

1. Light rays travel in the form of zigzag lines in the air. (.....)
2. Carton, paper, and wood are transparent materials. (.....)
3. If I can see my face clearly on a surface, this means that it is a rough surface.
 (.....)

(B) Compare between each of the following:

P.O.C	Transparent materials	Opaque materials
Definition		

3 Cross out the odd word:

1. Paper – Glass – Water – Air (.....)
2. Wood – Mirror – Book – Wax (.....)

(B) Look at the opposite figures, the complete the sentences below:

1. The surface in figure (A) is considered as a surface, because
2. The surface in figure (B) is considered as a surface, because

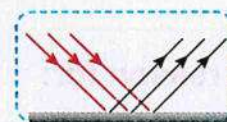


Figure (A)



Figure (B)

Concept 1.3

Lesson 3

Self-Assessment 12

15

1 (A) Choose the correct answer:

- Writing and reading are types of communication among
 (a) humans (b) birds (c) plants (d) animals
- Fireflies can communicate with each other through
 (a) smell sense (b) light (c) songs (d) sounds
- Fireflies use their sense of to communicate.
 (a) hearing (b) taste (c) smell (d) sight

(B) Complete the following sentences:

- Light is produced as a result of a that occurs inside the bodies of fireflies.
- Fireflies use their to release flashes of light.

2 (A) Put (✓) or (X):

- A firefly is not a bird but it is a type of reptiles. ()
- Changing the pattern of lighting up in a firefly is a structural adaptation. ()
- Fireflies are found on mangrove trees in Thailand. ()

(B) What happens if:

- A firefly can't emit flashes?

- A firefly wants to attract a mate to reproduce?

3 (A) Classify the following items according to the energy used to communicate:

(Traffic lights – Car horn – Fire alarm – Language)

Item(s) can use sound energy	Item(s) can use light energy

(B) Give a reason for:

- Fireflies emit a luminous flash.

Concept 1.3

Lesson 4

Self-Assessment 13

15

1 (A) Put (✓) or (X):

1. Animals use different senses to communicate with each others. ()
2. Writing is a type of codes which consists of symbols that gives a specific meaning according to arrangement of letters. ()
3. Lighthouse sends sound codes that tell sailor where they are. ()

(B) Write the scientific term:

1. It is a pattern that has a meaning. ()
2. It is a code that means that you say "no". ()

2 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Fireflies	(a) can be used by people to communicate over distance of many kilometers.
2. Drums	(b) depend on light energy to communicate.
3. Signal fires	(c) is a way of coding that uses the sense of hearing to communicate.

1. 2. 3.

(B) Complete the following sentences:

1. When your receive the signals of the red traffic light, it sends messages to the that decodes the meaning.
2. is the sense organ that detects the sound energy.

3 (A) Choose the correct answer:

1. Travelers use to attract the attention of helicopter pilots to rescue them.
(a) sound (b) mirrors (c) wood (d) food
2. All the following are examples of codes, except
(a) traffic lights (b) language (c) sleeping (d) thumbs-up
3. The signals of is collected by your ears.
(a) a fire alarm (b) lighthouse (c) rescue flare (d) traffic lights

(B) Give a reason for:

- Facial expressions are important for communicating with other people.

(C) Mention two examples of a code.

1 (A) Cross out the odd word:

• Air – Water – Wood – Glass

(.....)

(B) Give a reason for:

1. A mirror reflects light better than a painted surface.

.....
.....

2. The pupil of nocturnal animals' eyes opens wider than those of humans' eyes.

.....
.....

3. A shadow is formed when light falls on an opaque object.

.....
.....

4. Fireflies emit luminous flashes.

.....
.....

2 (A) Choose the correct answer:

• Light is a form of

(a) Force

(b) work

(c) matter

(d) energy

(B) Mention one example for each of the following:

1. Beetles.

.....

2. A natural source of light.

.....

3. A liquid transparent object.

.....

4. A behavioral adaptation in fireflies.

.....

3 (A) Put (✓) or (X):

1. Light travels in straight lines. ()
2. Speaking is the only way of communication between people. ()

(B) Write the scientific term:

1. It is a device that a human can depend on to see in the dark. (.....)
2. It is the feature of light helps you see yourself in the mirror. (.....)
3. They are materials that we can't see through. (.....)

4 (A) Classify the following materials into transparent and opaque materials:

(An aluminum pot – Lenses – Glass bottle – Rock)

Transparent materials	Opaque materials
.....	
.....	
.....	

(B) Look at the opposite figure, then complete the sentence below:

- The shadow of the box is formed, because the box is object that doesn't allow light to pass through, but it some light rays, and other light rays in direction(s).



(C) What happens when:

- Light falls on a shiny, smooth surface like a mirror?

.....
.....

1 (A) Cross out the odd word:

• Flashlight – Moon – Fire – ~~Candle~~

(.....)

(B) Give a reason for:

1. Wood is considered an opaque material.

.....
.....

2. Nocturnal animals can see better than human in dim light.

.....
.....

3. You can see an object placed behind a glass cup or lens.

.....
.....

4. Cats' eyes seem to glow in the dark.

.....
.....

2 (A) Put (✓) or (X):

• You can see objects that emit their own light or reflect light.

()

(B) Complete the following sentences:

1. Different languages have different

2. The form of energy that can be seen is energy.

3. The pupils of eyes of nocturnal animals usually open than pupil of a human eye.

4. The human body is considered as a/an object.

3 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Echolocation	(a) is a method of communication used by humans and animals.
2. Writing	(b) is a method of communication used by humans only.
	(c) is a method of communication used by animals only.

1. 2.

(B) What happens if:

1. Light falls on a rough surface, such as wood or paper?

.....

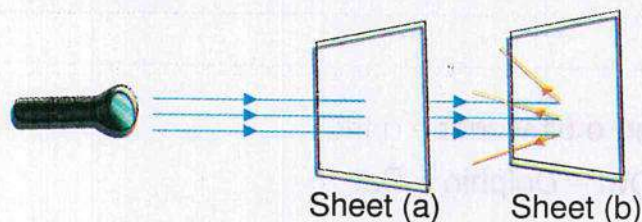
2. A firefly wants to attract a mate to reproduce?

.....

3. You place an opaque object between a light source and a wall?

.....

4 (A) Look at the following figure, then choose the correct answer:



1. Sheet (a) is made up of

- (a) wood (b) aluminum (c) glass (d) cardboard

2. Sheet (b) represents a surface such as

- (a) smooth – mirror (b) rough – mirror
(c) smooth – wood (d) rough – wood

(B) Write the scientific term:

1. It is a body that appears lighted in the sky, but it is not considered as a source of light. (.....)

2. They are materials that don't allow light to pass through. (.....)

3. They are objects that emit their own light. (.....)

1 (A) Correct the underlined word:

- The moon is one of the light sources in the sky. (.....)

(B) What's meant by each of the following:

1. Source of light.

.....

2. Code.

.....

(C) Give a reason for:

1. Glass is a transparent material.

.....

.....

2. A mirror reflects light better than a painted surface.

.....

.....

2 (A) Cross out the odd word:

- Fishing cat – Owl – Dolphin – Bat (.....)

(B) Write the scientific term:

1. It is a structural adaptation in the eye, which helps animals in hunting at night and avoids being hunted by other animals. (.....)
2. It is the organ that is affected by light and responsible for vision. (.....)

(C) What happens when:

1. Fireflies do not emit flashes?

.....

2. Your eyes see the red traffic light?

.....

3 (A) Choose the correct answer:

1. When light falls on _____, a shadow is formed.
(a) a glass lens (b) water (c) a glass cup (d) a wooden chair
2. Which of the following organs work together to enable you to hear different sounds?
(a) Ears and brain (b) Eyes and brain
(c) Nose and brain (d) Tongue and brain

(B) Complete the following sentences:

1. Light reflection depends on the _____ of the surfaces of objects.
2. Fireflies use their _____ to release flashes.
3. Travelers use _____ to attract the attention of helicopter pilots to rescue them.

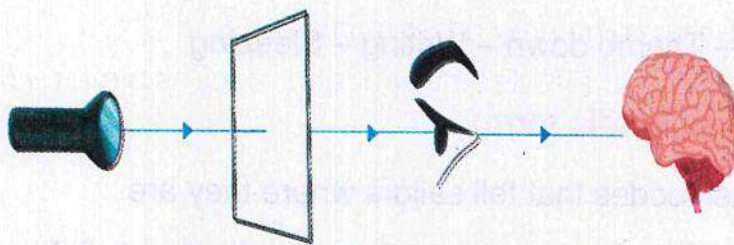
4 (A) Put (✓) or (X):

1. If I can see my face clearly on a surface, this means that it is a rough surface. ()
2. Nocturnal animals have smaller eyes than humans. ()

(B) Compare between each of the following:

P.O.C	Transparent objects	Opaque objects
Definition	 	

(C) Study the animals in the following picture, then answer the following questions:



1. Which organs work together to enable you see the light ray?
.....
2. What happens if the glass sheet is replaced by a cardboard sheet?
.....

1 (A) Put (✓) or (X):

- Fireflies use the sense of sight to communicate with each other. ()

(B) Mention one example for each of the following:

- 1.** An opaque object.

.....

.....

- 2.** A transparent object.

.....

.....

- 3.** An artificial light source.

.....

.....

- 4.** A nocturnal animal with an excellent night vision.

.....

.....

2 (A) Cross out the odd word:

- Thumb up – Thumb down – Writing – Sleeping (.....)

(B) Write the scientific term:

- 1.** It sends flash codes that tell sailors where they are. (.....)
- 2.** They are organisms that communicate by displaying light. (.....)
- 3.** They are materials that allow light to pass through. (.....)
- 4.** It is a pattern that has a meaning. (.....)

3 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Signal fires	(a) are types of communication used by humans and animals.
2. Light and sound	(b) are types of communication used by animals only.
	(c) are used by people to communicate over distances of many kilometers.

1. 2.

(B) Complete the following sentences:

1. energy affects the sensory receptors in the eye, causing vision.
2. A firefly is not a bird but it is a type of
3. is formed when the light strikes a human body.

4 (A) Choose the correct answer:

1. If you want to make a box to see its contents from the outside, which of the following materials can you use?
(a) Cardboard (b) Transparent glass
(c) Opaque plastic (d) Carton
2. Light rays travel in the form of lines in the air.
(a) curved (b) straight (c) circular (d) zigzag

(B) Give a reason for:

1. Glass allows light to pass through.
.....
2. Fire is a source of light, while the moon is not a source of light.
.....
3. The light rays falling on a mirror are reflected on one direction.
.....

Concept 2.1

Lesson 1

Self Assessment 14

15

1 (A) Choose the correct answer:

1. To slow down the speed of a Shockwave truck quickly, the driver uses
☐ (a) engines ☐ (b) rockets ☐ (c) brakes ☐ (d) parachutes
2. The force that is used to kick a ball with your foot is
☐ (a) a pull ☐ (b) a push ☐ (c) sound ☐ (d) light
3. The speed of the Shockwave truck is that of a normal truck.
☐ (a) slower than ☐ (b) faster than ☐ (c) similar to ☐ (d) equal to

(B) Write the scientific term:

1. It is the force that you use to move an object away from you. (.....)
2. It is the force that you use to move an object toward you. (.....)

2 (A) Put (✓) or (X):

1. The body whose position does not change is in a static state. ()
2. Air has no force. ()
3. Lifting up a bag from the ground is a pushing force. ()

(B) Give a reason for:

1. A cart starts moving when air comes out of the fire extinguishers.
.....
2. The speed of a jet airplane is greater than the speed of a truck.
.....

3 (A) Complete the following sentences using the words below:

(push – force – less – more – pull)

1. The stopping object can't move until a acts on it.
2. There are two types of forces which are and forces.
3. The engine of an airplane is powerful than that of a normal truck.

(B) What happens if:

1. You kick the ball with a certain force?
.....
2. We increase the number of fire extinguishers fixed onto a cart?
.....

1 (A) Put (✓) or (X):

1. An object moves when balanced forces act on it. ()
2. A pulling force is used to operate an electrical switch. ()
3. When the position of an object changes relative to a fixed point, it moves. ()

(B) Write the scientific term:

1. It is the change in an object's position relative to a fixed point. (.....)
2. It is a push or a pull that is applied on an object. (.....)

2 (A) Choose the correct answer:

1. The force that pulls objects down toward the Earth is called
 (a) gravity (b) magnetism (c) pushing force (d) electricity
2. When an object is in motion, this means that its changes.
 (a) color (b) shape (c) position (d) size
3. You can't see the movement of
 (a) a flying airplane (b) a running horse
 (c) sea waves (d) the planet Earth

(B) What happens if:

1. Balanced forces act on a static object?

2. You let a ball from your hand?

3 (A) Choose from column (A) what suits it in column (B):

Column (A)	Column (B)
1. Balanced forces	(a) is a pulling force.
2. Gravity	(b) cause the movement of static objects.
3. Unbalanced forces	(c) don't change the position of a static object.

1. 2. 3.

(B) Observe the opposite figure, and then answer the following questions:

1. Are the forces on both sides balanced or unbalanced?
2. In which direction will the rope move? (Right or left)



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر نوفمبر



Concept

1.3

Q1

Choose the correct answer:

- 1 energy affects the sensory receptors in the eyes, causing vision. (Dakahlia 2023)
a. Sound b. Kinetic c. Light d. Magnetic
- 2 The pupils of nocturnal animal open those of humans. (Giza 2023)
a. narrower than b. similar to c. typical to d. wider than
- 3 Each of the following is considered a source of light, except the (Cairo 2024)
a. fire b. Sun c. lamp d. eye
- 4 The is a natural source of light. (Week 6 H.W)
a. fire b. moon c. Sun d. candle
- 5 Which of the following organs are working together for seeing different objects? (Kafr El-Sheikh 2022)
a. Nose and brain b. Eyes and brain
c. Ears and brain d. Tongue and brain
- 6 Light travels in lines in the air. (Giza 2023 - Week 6 C.W)
a. curved b. straight c. circular d. zigzag
- 7 Light is a form of (Week 6 H.W)
a. energy b. work c. matter d. force
- 8 Hossam wants to make a box to see its contents from the outside; which of the following materials will he use? (Week 6 C.W)
a. Cardboard b. Transparent glass
c. Opaque plastic d. Smooth mirror
- 9 When light falls on a mirror, it is (Week 6 H.W)
a. reflected b. refracted c. scattered d. absorbed
- 10 In order to see things clearly, we must have a source of energy. (Week 8 C.W)
a. chemical b. light c. sound d. heat
- 11 Which of the following is an opaque object? (Week 6 H.W)
a. Lenses b. Wood c. Water d. Air

- 12 All the following are opaque objects, except (Giza 2023)
a. wood b. water c. carton d. human body
- 13 Which of the following materials reflect light best? (Week 6 C.W)
a. Wood b. Cloth c. Mirrors d. Paper
- 14 The process of vision occurs as a result of of light. (Week 6 C.W)
a. scattering b. reflection c. absorption d. destroying
- 15 produce a chemical reaction inside their bodies to light up.
a. Owls b. Fireflies c. Frogs d. Bats (Azhar 2023)
- 16 The firefly produces patterns of light to other fireflies. (Giza 2022)
a. hear b. warn c. mate with d. b and c
- 17 A firefly is not a bird, but it is a type of (Sharkia 2024)
a. flies b. lizards c. beetles d. reptiles
- 18 Fireflies use their to release flashes. (Week 7 H.W)
a. eyes b. wings c. tails d. gills
- 19 All the following are forms of codes, except
a. traffic lights b. facial expressions
c. swimming d. drums (Ismailia 2022 - Week 7 C.W)
- 20 Raising your thumb up or down is a type of
a. sound b. light c. language d. code
(Week 7 H.W - Ismailia 2023)
- 21 Writing and reading are ways to communication for
a. humans b. animals c. birds d. plants
(Giza 2022 - Week 7 C.W)
- 22 Animals communicate together through
a. writing b. reading
c. talking d. sound and light (Giza 2022)
- 23 Travelers use to attract the attention of helicopter pilots to rescue them. (Week 7 C.W)
a. traffic lights b. mirrors c. drums d. lighthouses

- 24 Sense organs collect information and send signals to the for processing and understanding. (Port Said 2022)
- a. hands b. legs c. brain d. stomach

Q2

Put (✓) or (X):

- 1 Nocturnal animals have larger eyes than humans. (Damietta 2024 - Week 6 H.W) ()
- 2 The Sun and the moon are sources of light. (Week 6 C.W) ()
- 3 Both humans and animals need a light source to see. (Giza - Dakhlia 2023) ()
- 4 Eyes are considered sensory organs of light, not as a source of light. (Beni Suef 2023) ()
- 5 All animals have the ability to see at night. (Assiut 2023) ()
- 6 Fishing cats can't hunt in low-light places. (Dakahlia 2023) ()
- 7 Humans have excellent night vision, better than fishing cats. (Suez 2024) ()
- 8 Light travels in straight lines. (Alex. 2023) ()
- 9 Rough objects reflect light better than smooth ones. (Week 6 H.W) ()
- 10 Objects can be seen due to the absorption of light. (Week 6 C.W) ()
- 11 Smooth surfaces reflect light better than rough surfaces. (Week 6 C.W) ()
- 12 We can see the moon bright although it doesn't emit any light. (Giza 2024) ()
- 13 Transparent objects include mirrors and lenses. (Cairo 2024) ()
- 14 Transparent objects don't allow light to pass through it. (Alex. 2024) ()
- 15 If I can see my face clearly on a surface, this means that it is a smooth, shiny surface. (Qalyubia 2023) ()
- 16 Wood is a transparent object that allows light to pass through it. (Assiut 2023) ()
- 17 Writing is a way of communication between animals. (Beni Suef 2023) ()
- 18 Sound and light are common methods of communication between humans and animals. (Menoufia 2024) ()
- 19 Speaking is the only way to communicate with people. (Giza 2023) ()
- 20 In order for the code to be translated, the brain must identify it. (Assiut 2023) ()

Q3**Write the scientific term:**

- 1 It is the organ that is affected by light and responsible for sight.
(Giza 2024 - Week 6 H.W) (.....)
- 2 They are animals that communicate with each other by flashing (lighting).
(Week 7 Test 2) (.....)
- 3 They are objects that emit their own light. (Cairo 2023) (.....)
- 4 It is a body that appears lighted in the sky, but it is not considered a source of light.
(Giza 2023) (.....)
- 5 It is a device that humans can depend on to see in the dark.
(Cairo 2023) (.....)
- 6 It is a visible form of energy that enables us to see.
(Cairo 2023) (.....)
- 7 It is a structural adaptation in the eyes that helps animals in hunting at night and to avoid being hunted by other animals.
(Azhar - Giza 2023) (.....)
- 8 They are materials that allow light to pass through.
(Cairo 2023) (.....)
- 9 It is a type of surface that reflects light in different directions.
(Cairo 2023) (.....)
- 10 They are materials through which objects cannot be seen.
(Week 6 H.W) (.....)
- 11 It is a pattern that has meaning. (Week 7 Test 1) (.....)
- 12 Raising your thumb up or down (Week 7 Test 3) (.....)

Q4.**Complete the following sentences:**

- 1 To communicate by sight, we need (Week 7 H.W)
- 2 The form of energy that can be seen is energy. (Alex. 2024)
- 3 The is the sensory organ that is affected by light. (Kafr El-Sheikh 2023)
- 4 All cats have a at the back of their eyes.
(Qalyubia 2024)

- 5 Humans use to see in low-light places. (Dakahlia 2023)
- 6 Fishing cats can hunt at night due to the bouncing off of energy. (Beni Suef 2024)
- 7 The pupils of eyes of nocturnal animals usually open than the pupils of humans eyes. (Dakahlia 2023)
- 8 The eyes of fishing cats have a mirror-like membrane that bounces off the light, and this is considered a adaptation. (Beni Suef 2022)
- 9 Fireflies are found on trees in Thailand. (Week 7 Test 3)
- 10 Fireflies use their to release flashes of light. (Week 7 Test 1)
- 11 Fireflies communicate with each other through (Mansoura 2023 - Week 7 C.W)
- 12 Fireflies use the sense of to communicate with each other. (Cairo 2023 - Week 7 H.W)
- 13 Light is produced as a result of a that occurs inside the bodies of the fireflies. (Dakahlia 2023 - Week 7 C.W)
- 14 In order to translate the code, the must identify it. (Week 7 H.W)
- 15 Man uses codes to transfer (Week 7 H.W)
- 16 Raising your thumb up or down is a type of (Week 7 C.W)
- 17 One of the ways of communication for humans is (Week 7 H.W)
- 18 One example of codes is (Week 7 Test 2)
- 19 Hand signals are a type of (Week 8 C.W)
- 20 Light travels in lines. (Week 8 C.W - Alex. 2024)
- 21 When light falls on an object, it , so we can see this object. (Dakahlia 2023)
- 22 When light falls on an opaque object, is formed. (Dakahlia 2023)
- 23 Cloth and paper are considered surfaces that scatter or diffuse light energy. (Giza 2024)
- 24 Smooth surfaces reflect light in direction. (Cairo 2023)
- 25 Your eyes use to collect information. (Week 7 C.W)
- 26 Man uses his senses of and to communicate. (Week 7 C.W)
- 27 A is considered a pattern that has a meaning. (Week 7 H.W)

Q5 Cross out the odd word:

- 1 Fishing cat – Owl – Dolphin – Bat (Azhar - Giza 2023) (.....)
- 2 Flashlight – The moon – Fire – Candle (Dakahlia 2024) (.....)
- 3 Wood – Glass cup – Book – Wax (Cairo 2023) (.....)
- 4 Air – Water – Wood – Glass (Dakahlia 2023) (.....)

Q6 Give reasons for:

- 1 The moon appears bright although it is not a source of light.
(Cairo 2024 - Week 6 C.W)
.....
.....
- 2 Fireflies emit a luminous flash. (Week 7 Test 1)
.....
.....
- 3 Some animals have the ability to see in the dark. (Red Sea 2023)
.....
.....
- 4 The eyes of humans do not glow in the dark like cats. (Cairo 2023)
.....
.....
- 5 Glass is a transparent material. (Week 8 Test 2 - Alex. 2024)
.....
.....
- 6 Humans sometimes use codes. (Week 7 Test 2)
.....
.....
- 7 A mirror can reflect light better than a painted surface. (Giza 2023)
.....
.....
- 8 Wood is considered an opaque material. (Alex. 2024)
.....
.....
- 9 A shadow is formed when light falls on an opaque object. (Dakahlia 2024)
.....
.....
- 10 You can see an object placed behind a glass cup or a lens. (Qalyubia 2023)
.....
.....
- 11 None of the light energy passes through opaque objects. (Alex. 2023)
.....
.....

Q7

What happens if:

- 1 Fireflies do not emit flashes?

(Week 7 Test 3)

.....

.....

.....

- 2 A firefly wants to attract a mate to reproduce?

(Cairo 2023)

.....

- 3 Light falls on a rough surface, such as wood or paper?

(Week 6 H.W)

.....

- 4 The backcountry hikers do not have mirrors?

(Week 7 Test 1)

.....

- 5 The codes have no meaning?

(Week 7 Test 2)

.....

- 6 Light falls on a shiny, smooth surface, such as a mirror?

(Red Sea 2023 - Week 6 H.W)

.....

- 7 The mirror-like membrane in a fishing cat's eyes is not present?

.....

(Dakahlia 2024)

- 8 You place an opaque object between a light source and a wall?

.....

(Ismailia 2023)

Q8

What is meant by each of the following:

- 1 Transparent objects

(Week 8 C.W)

.....

.....

- 2 Code

(Week 7 C.W)

.....

Q9

Answer the following questions:

- 1 Mention an example of behavioral adaptation in fireflies. (Week 7 Test 2)

.....

.....

- 2 Mention one benefit of flashes emitted by fireflies. (Week 7 Test 3)

.....

.....

- 3 Mention two examples of codes used by humans in their daily lives.

(Week 7 H.W)

.....

Concept 2.1 Lessons 1 & 2

Q1 Choose the correct answer:

- 1 All the following are examples of pulling force, except.....
a. opening the desk drawer b. kicking a ball
c. tug-of-war game d. lifting up a bag (Qalyubia 2024)
- 2 When you move something toward you, this represents
a. pushing force b. light energy
c. pulling force d. sound energy (Cairo 2023)
- 3 When you move something away from you, this represents
a. pushing force b. light energy
c. pulling force d. sound energy (Alex. 2024)
- 4 Push or pull actions are considered types of
a. energy b. device
c. force d. adaptation (Giza 2023)
- 5 The force that is used to kick a ball with your legs is a
a. pull b. push
c. sound d. light (Port Said - Menoufia 2023)
- 6 Objects fall down to the center of the Earth by the force of
a. friction b. gravity
c. wind d. pushing (Cairo - Giza - Alex. 2023)
- 7 You can see the movement of the following objects, except the movement of
a. a flying airplane b. a running horse
c. sea waves d. the planet Earth (Giza 2023)
- 8 When an object is in motion, this means that its changes.
a. color b. shape
c. size d. position (Cairo 2023)
- 9 Which of the following will cause an object to move?
a. Balanced forces b. Unbalanced forces
c. Sound energy d. Light energy (Luxor 2022)

- 10** All the following are examples of motion, except
a. a running person **b.** a ball traveling through the air
c. a flying bird **d.** a sleeping dog (Cairo 2024)
- 11** When you sit on a chair, the force of gravity is and holding you in the chair. (Cairo 2022)
a. pulling you upward **b.** pulling you downward
c. pushing you upward **d.** pushing you downward

Q2 Put (✓) or (X):

- 1 The engine of a jet plane is weaker than the engine of a car. (Week 9 H.W) ()
- 2 Objects do not move if no force affects them. (Week 9 H.W) ()
- 3 The body is static when it moves from one place to another. (Week 9 H.W) ()
- 4 The movement of the planets can be seen in the sky. (Week 9 H.W) ()
- 5 A normal truck can move faster than a jet airplane. (Suez 2024) ()
- 6 When the position of an object changes in relation to a fixed point, it moves. (Assiut 2023) ()
- 7 Unbalanced forces cause a change in the object's position. (Minia 2024) ()
- 8 Gravity pulls objects upward. (Port Said 2023) ()
- 9 Unbalanced forces cause the motion of objects. (Mansoura 2023) ()
- 10 Moving an object away from you represents a pulling force. (Cairo 2024) ()

Q3 Write the scientific term:

- 1 It is a push or pull that is applied to an object, causing it to change its position. (Cairo 2022) (.....)
- 2 It is a force that makes objects move away from you. (Menoufia 2024 - Week 9 H.W) (.....)
- 3 It is a force that causes objects to move toward you. (Week 9 H.W) (.....)

- 4 It is a change in an object's position relative to a fixed point.
(Giza 2024) (.....)
- 5 It is a force that pulls objects down toward the Earth.
(Behira 2024 - Week 9 Test 1) (.....)

04 Complete the following sentences:

- 1 cause the movement of static bodies. (Week 9 C.W)
- 2 The body whose position does not change is in a state.
(Week 9 C.W)
- 3 There are two types of forces, which are and forces. (Week 9 Test 2)
- 4 Kicking the ball is considered a force. (Week 9 C.W)
- 5 Opening the door handle is a force. (Week 9 H.W)
- 6 The leaves blow due to the force of the air. (Week 9 C.W)
- 7 Tightening the hook is a force. (Week 9 Test 3)
- 8 is the force that pulls things downwards. (Cairo 2024)
- 9 The fastest truck in the world is the truck. (Week 9 C.W)
- 10 The speed of trucks differ according to the and of engines. (Week 9 H.W)
- 11 The parachutes supplied to the Shockwave truck help drivers to reduce its (Week 9 C.W)
- 12 When increasing the engine power of a truck, the speed will (Week 9 C.W)
- 13 To move a car more quickly, you must the engine pushing power. (Week 9 C.W)
- 14 The Shockwave truck is stopped by
(Alex. 2023 - Week 9 H.W)
- 15 A moving object is acted on by forces, while the body at rest is acted on by balanced forces. (Week 9 Test 1)

Q5 Give reasons for:

- 1 The Shockwave truck is faster than the normal truck.

(Giza 2024 - Week 9 Test 1)

- 2 The cart starts moving when the gases come out of the fire extinguishers.

(Week 9 Test 2)

- 3 The body does not move when it is exerted on by balanced forces.

(Week 9 Test 3)

Q6 What happens if:

- 1 You hit a ball strongly with your foot?

(Alex. (East) 2024)

- 2 We increase the number of fire extinguishers on the cart?

(Week 9 Test 2)

- 3 Balanced forces act on a static object?

(Beni Suef 2023)

Q7 What is meant by each of the following:

- 1 Pushing force

(Week 9 C.W)

- 2 Pulling force

(Week 9 C.W)

- 3 Movement (Motion)

(Week 9 H.W)

- 4 Gravity

(Week 9 H.W)

Q8 Answer the following questions:

- 1 Give an example of pushing and pulling forces. (Week 9 Test 1)

.....

.....

- 2 Mention the state of the body when balanced and other unbalanced forces affect it. (Week 9 Test 2)

.....

.....

- 3 Give an example of an easily seen movement and another that cannot be seen. (Week 9 Test 3)

.....

.....

Concept

1.3

Q1

Choose the correct answer:

- 1 energy affects the sensory receptors in the eyes, causing vision. (Dakahlia 2023)
a. Sound b. Kinetic c. Light d. Magnetic
- 2 The pupils of nocturnal animal open those of humans. (Giza 2023)
a. narrower than b. similar to c. typical to d. wider than
- 3 Each of the following is considered a source of light, except the (Cairo 2024)
a. fire b. Sun c. lamp d. eye
- 4 The is a natural source of light. (Week 6 H.W)
a. fire b. moon c. Sun d. candle
- 5 Which of the following organs are working together for seeing different objects? (Kafr El-Sheikh 2022)
a. Nose and brain b. Eyes and brain
c. Ears and brain d. Tongue and brain
- 6 Light travels in lines in the air. (Giza 2023 - Week 6 C.W)
a. curved b. straight c. circular d. zigzag
- 7 Light is a form of (Week 6 H.W)
a. energy b. work c. matter d. force
- 8 Hossam wants to make a box to see its contents from the outside; which of the following materials will he use? (Week 6 C.W)
a. Cardboard b. Transparent glass
c. Opaque plastic d. Smooth mirror
- 9 When light falls on a mirror, it is (Week 6 H.W)
a. reflected b. refracted c. scattered d. absorbed
- 10 In order to see things clearly, we must have a source of energy. (Week 8 C.W)
a. chemical b. light c. sound d. heat
- 11 Which of the following is an opaque object? (Week 6 H.W)
a. Lenses b. Wood c. Water d. Air

- 12 All the following are opaque objects, except (Giza 2023)
 a. wood b. water c. carton d. human body
- 13 Which of the following materials reflect light best? (Week 6 C.W)
 a. Wood b. Cloth c. Mirrors d. Paper
- 14 The process of vision occurs as a result of of light. (Week 6 C.W)
 a. scattering b. reflection c. absorption d. destroying
- 15 produce a chemical reaction inside their bodies to light up.
 a. Owls b. Fireflies c. Frogs d. Bats (Azhar 2023)
- 16 The firefly produces patterns of light to other fireflies. (Giza 2022)
 a. hear b. warn c. mate with d. b and c
- 17 A firefly is not a bird, but it is a type of (Sharkia 2024)
 a. flies b. lizards c. beetles d. reptiles
- 18 Fireflies use their to release flashes. (Week 7 H.W)
 a. eyes b. wings c. tails d. gills
- 19 All the following are forms of codes, except
 a. traffic lights b. facial expressions
 c. swimming d. drums (Ismailia 2022 - Week 7 C.W)
- 20 Raising your thumb up or down is a type of
 a. sound b. light c. language d. code
 (Week 7 H.W - Ismailia 2023)
- 21 Writing and reading are ways to communication for
 a. humans b. animals c. birds d. plants
 (Giza 2022 - Week 7 C.W)
- 22 Animals communicate together through
 a. writing b. reading
 c. talking d. sound and light (Giza 2022)
- 23 Travelers use to attract the attention of helicopter pilots to rescue them. (Week 7 C.W)
 a. traffic lights b. mirrors c. drums d. lighthouses

- 24 Sense organs collect information and send signals to the for processing and understanding. (Port Said 2022)
- a. hands b. legs c. brain d. stomach

Q2 Put (✓) or (X):

- 1 Nocturnal animals have larger eyes than humans. (Damietta 2024 - Week 6 H.W) (✓)
- 2 The Sun and the moon are sources of light. (Week 6 C.W) (X)
- 3 Both humans and animals need a light source to see. (Giza - Dakhlia 2023) (✓)
- 4 Eyes are considered sensory organs of light, not as a source of light. (Beni Suef 2023) (✓)
- 5 All animals have the ability to see at night. (Assiut 2023) (X)
- 6 Fishing cats can't hunt in low-light places. (Dakhlia 2023) (X)
- 7 Humans have excellent night vision, better than fishing cats. (Suez 2024) (X)
- 8 Light travels in straight lines. (Alex. 2023) (✓)
- 9 Rough objects reflect light better than smooth ones. (Week 6 H.W) (X)
- 10 Objects can be seen due to the absorption of light. (Week 6 C.W) (X)
- 11 Smooth surfaces reflect light better than rough surfaces. (Week 6 C.W) (✓)
- 12 We can see the moon bright although it doesn't emit any light. (Giza 2024) (✓)
- 13 Transparent objects include mirrors and lenses. (Cairo 2024) (X)
- 14 Transparent objects don't allow light to pass through it. (Alex. 2024) (X)
- 15 If I can see my face clearly on a surface, this means that it is a smooth, shiny surface. (Qalyubia 2023) (✓)
- 16 Wood is a transparent object that allows light to pass through it. (Assiut 2023) (X)
- 17 Writing is a way of communication between animals. (Beni Suef 2023) (X)
- 18 Sound and light are common methods of communication between humans and animals. (Menoufia 2024) (✓)
- 19 Speaking is the only way to communicate with people. (Giza 2023) (X)
- 20 In order for the code to be translated, the brain must identify it. (Assiut 2023) (✓)

Q3

Write the scientific term:

- 1 It is the organ that is affected by light and responsible for sight.
(Giza 2024 - Week 6 H.W) (**Eye**)
- 2 They are animals that communicate with each other by flashing (lighting).
(Week 7 Test 2) (**Fireflies**)
- 3 They are objects that emit their own light. (Cairo 2023) (**Sources of light**)
- 4 It is a body that appears lighted in the sky, but it is not considered a source of light.
(Giza 2023) (**The moon**)
- 5 It is a device that humans can depend on to see in the dark.
(Cairo 2023) (**Night vision goggles**)
- 6 It is a visible form of energy that enables us to see.
(Cairo 2023) (**Light energy**)
- 7 It is a structural adaptation in the eyes that helps animals in hunting at night and to avoid being hunted by other animals.
(Azhar - Giza 2023) (**Mirror-like membrane**)
- 8 They are materials that allow light to pass through.
(Cairo 2023) (**Transparent materials**)
- 9 It is a type of surface that reflects light in different directions.
(Cairo 2023) (**Rough surface**)
- 10 They are materials through which objects cannot be seen.
(Week 6 H.W) (**Opaque objects**)
- 11 It is a pattern that has meaning. (Week 7 Test 1) (**Code**)
- 12 Raising your thumb up or down (Week 7 Test 3) (**Code**)

Q4.

Complete the following sentences:

- 1 To communicate by sight, we need **light**. (Week 7 H.W)
- 2 The form of energy that can be seen is **light** energy. (Alex. 2024)
- 3 The **eye** is the sensory organ that is affected by light. (Kafr El-Sheikh 2023)
- 4 All cats have a **mirror-like membrane** at the back of their eyes.
(Qalyubia 2024)

- 5 Humans use night vision goggles to see in low-light places. (Dakahlia 2023)
- 6 Fishing cats can hunt at night due to the bouncing off of light energy. (Beni Suef 2024)
- 7 The pupils of eyes of nocturnal animals usually open wider than the pupils of humans eyes. (Dakahlia 2023)
- 8 The eyes of fishing cats have a mirror-like membrane that bounces off the light, and this is considered a structural adaptation. (Beni Suef 2022)
- 9 Fireflies are found on mangrove trees in Thailand. (Week 7 Test 3)
- 10 Fireflies use their wings to release flashes of light. (Week 7 Test 1)
- 11 Fireflies communicate with each other through light. (Mansoura 2023 - Week 7 C.W)
- 12 Fireflies use the sense of sight to communicate with each other. (Cairo 2023 - Week 7 H.W)
- 13 Light is produced as a result of a chemical reaction that occurs inside the bodies of the fireflies. (Dakahlia 2023 - Week 7 C.W)
- 14 In order to translate the code, the brain must identify it. (Week 7 H.W)
- 15 Man uses codes to transfer information. (Week 7 H.W)
- 16 Raising your thumb up or down is a type of code. (Week 7 C.W)
- 17 One of the ways of communication for humans is writing. (Week 7 H.W)
- 18 One example of codes is raising the thumb up or down. (Week 7 Test 2)
- 19 Hand signals are a type of codes. (Week 8 C.W)
- 20 Light travels in straight lines. (Week 8 C.W - Alex. 2024)
- 21 When light falls on an object, it reflects, so we can see this object. (Dakahlia 2023)
- 22 When light falls on an opaque object, shadow is formed. (Dakahlia 2023)
- 23 Cloth and paper are considered rough surfaces that scatter or diffuse light energy. (Giza 2024)
- 24 Smooth surfaces reflect light in one direction. (Cairo 2023)
- 25 Your eyes use light to collect information. (Week 7 C.W)
- 26 Man uses his senses of sight and hearing to communicate. (Week 7 C.W)
- 27 A code is considered a pattern that has a meaning. (Week 7 H.W)

Q5 Cross out the odd word:

- 1 Fishing cat – Owl – Dolphin – Bat (Azhar - Giza 2023) (**Dolphin**)
- 2 Flashlight – The moon – Fire – Candle (Dakahlia 2024) (**The moon**)
- 3 Wood – Glass cup – Book – Wax (Cairo 2023) (**Glass cup**)
- 4 Air – Water – Wood – Glass (Dakahlia 2023) (**Wood**)

Q6 Give reasons for:

- 1 The moon appears bright although it is not a source of light.
(Cairo 2024 - Week 6 C.W)
Because it doesn't emit its own light, but it reflects the sunlight.
- 2 Fireflies emit a luminous flash. (Week 7 Test 1)
To communicate together to warn other fireflies from predators or to attract a mate to reproduce.
- 3 Some animals have the ability to see in the dark. (Red Sea 2023)
Because some animals have a mirror-like membrane at the back of their eyes that reflects the light.
- 4 The eyes of humans do not glow in the dark like cats. (Cairo 2023)
Because humans don't have mirror-like membranes in their eyes.
- 5 Glass is a transparent material. (Week 8 Test 2 - Alex. 2024)
Because glass allows light to pass through.
- 6 Humans sometimes use codes. (Week 7 Test 2)
To communicate and transmit information.
- 7 A mirror can reflect light better than a painted surface. (Giza 2023)
Because a mirror is smoother than a painted surface.
- 8 Wood is considered an opaque material. (Alex. 2024)
Because it doesn't allow light to pass through it.
- 9 A shadow is formed when light falls on an opaque object. (Dakahlia 2024)
Because an opaque object doesn't allow light to pass through it.
- 10 You can see an object placed behind a glass cup or a lens. (Qalyubia 2023)
Because glass is a transparent object that allows light to pass through it.
- 11 None of the light energy passes through opaque objects. (Alex. 2023)
Because opaque objects either reflect light or absorb it

Q7

What happens if:

- 1 Fireflies do not emit flashes?

(Week 7 Test 3)

They can't communicate with each other.

They can't warn other fireflies from predators.

They can't attract a mate to reproduce.

- 2 A firefly wants to attract a mate to reproduce?

(Cairo 2023)

It will produce a chemical reaction inside its body to light up.

- 3 Light falls on a rough surface, such as wood or paper?

(Week 6 H.W)

Light will reflect (scatter or diffuse) in different directions.

- 4 The backcountry hikers do not have mirrors?

(Week 7 Test 1)

They can't attract the attention of rescue helicopters.

- 5 The codes have no meaning?

(Week 7 Test 2)

Brain can't decode and interpret the meaning.

- 6 Light falls on a shiny, smooth surface, such as a mirror?

(Red Sea 2023 - Week 6 H.W)

Light will reflect in one direction

- 7 The mirror-like membrane in a fishing cat's eyes is not present?

The fishing cat can't see well in low-light places.

(Dakahlia 2024)

- 8 You place an opaque object between a light source and a wall?

A shadow is formed.

(Ismailia 2023)

Q8

What is meant by each of the following:

- 1 Transparent objects

(Week 8 C.W)

They are objects that allow light to pass through and things can be seen through them, such as air and glass.

- 2 Code

(Week 7 C.W)

It is a pattern that has a meaning.

Q9

Answer the following questions:

- 1 Mention an example of behavioral adaptation in fireflies. (Week 7 Test 2)

Fireflies change their flash patterns to match the flash patterns of other groups of fireflies to communicate with them.

- 2 Mention one benefit of flashes emitted by fireflies. (Week 7 Test 3)

They use them for warning other fireflies from predators or attracting a mate to reproduce.

- 3 Mention two examples of codes used by humans in their daily lives.

(Week 7 H.W)

Thumbs-up or down

Language

Writing

Concept 2.1 Lessons 1 & 2

Q1 Choose the correct answer:

- 1 All the following are examples of pulling force, except.....
a. opening the desk drawer b. kicking a ball
c. tug-of-war game d. lifting up a bag (Qalyubia 2024)
- 2 When you move something toward you, this represents
a. pushing force b. light energy
c. pulling force d. sound energy (Cairo 2023)
- 3 When you move something away from you, this represents
a. pushing force b. light energy
c. pulling force d. sound energy (Alex. 2024)
- 4 Push or pull actions are considered types of
a. energy b. device
c. force d. adaptation (Giza 2023)
- 5 The force that is used to kick a ball with your legs is a
a. pull b. push
c. sound d. light (Port Said - Menoufia 2023)
- 6 Objects fall down to the center of the Earth by the force of
a. friction b. gravity
c. wind d. pushing (Cairo - Giza - Alex. 2023)
- 7 You can see the movement of the following objects, except the movement of
a. a flying airplane b. a running horse
c. sea waves d. the planet Earth (Giza 2023)
- 8 When an object is in motion, this means that its changes.
a. color b. shape
c. size d. position (Cairo 2023)
- 9 Which of the following will cause an object to move?
a. Balanced forces b. Unbalanced forces
c. Sound energy d. Light energy (Luxor 2022)

- 10** All the following are examples of motion, except
 a. a running person b. a ball traveling through the air
 c. a flying bird d. a sleeping dog (Cairo 2024)
- 11** When you sit on a chair, the force of gravity is and holding you in the chair. (Cairo 2022)
 a. pulling you upward b. pulling you downward
 c. pushing you upward d. pushing you downward

Q2 Put (✓) or (X):

- 1 The engine of a jet plane is weaker than the engine of a car. (Week 9 H.W) (✖)
- 2 Objects do not move if no force affects them. (Week 9 H.W) (✔)
- 3 The body is static when it moves from one place to another. (Week 9 H.W) (✖)
- 4 The movement of the planets can be seen in the sky. (Week 9 H.W) (✖)
- 5 A normal truck can move faster than a jet airplane. (Suez 2024) (✖)
- 6 When the position of an object changes in relation to a fixed point, it moves. (Assiut 2023) (✔)
- 7 Unbalanced forces cause a change in the object's position. (Minia 2024) (✔)
- 8 Gravity pulls objects upward. (Port Said 2023) (✖)
- 9 Unbalanced forces cause the motion of objects. (Mansoura 2023) (✔)
- 10 Moving an object away from you represents a pulling force. (Cairo 2024) (✖)

Q3 Write the scientific term:

- 1 It is a push or pull that is applied to an object, causing it to change its position. (Cairo 2022) (**Force**)
- 2 It is a force that makes objects move away from you. (Menoufia 2024 - Week 9 H.W) (**Pushing force**)
- 3 It is a force that causes objects to move toward you. (Week 9 H.W) (**Pulling force**)

- 4 It is a change in an object's position relative to a fixed point.
(Giza 2024) (**Motion**)
- 5 It is a force that pulls objects down toward the Earth.
(Behira 2024 - Week 9 Test 1) (**Gravity**)

Q4 Complete the following sentences:

- 1 **Unbalanced forces** cause the movement of static bodies. (Week 9 C.W)
- 2 The body whose position does not change is in a **static** state.
(Week 9 C.W)
- 3 There are two types of forces, which are **pull** and **push** forces. (Week 9 Test 2)
- 4 Kicking the ball is considered a **pushing** force. (Week 9 C.W)
- 5 Opening the door handle is a **pulling** force. (Week 9 H.W)
- 6 The leaves blow due to the force of **pushing** the air. (Week 9 C.W)
- 7 Tightening the hook is a **pulling** force. (Week 9 Test 3)
- 8 **Gravity** is the force that pulls things downwards. (Cairo 2024)
- 9 The fastest truck in the world is the **Shockwave** truck. (Week 9 C.W)
- 10 The speed of trucks differ according to the **power** and **number** of engines.
(Week 9 H.W)
- 11 The parachutes supplied to the Shockwave truck help drivers to reduce its **speed**. (Week 9 C.W)
- 12 When increasing the engine power of a truck, the speed will **increase**.
(Week 9 C.W)
- 13 To move a car more quickly, you must **increase** the engine pushing power. (Week 9 C.W)
- 14 The Shockwave truck is stopped by **3 parachutes**.
(Alex. 2023 - Week 9 H.W)
- 15 A moving object is acted on by **unbalanced** forces, while the body at rest is acted on by balanced forces. (Week 9 Test 1)

Q5

Give reasons for:

- 1 The Shockwave truck is faster than the normal truck.

(Giza 2024 - Week 9 Test 1)

Because it has three jet engines.

- 2 The cart starts moving when the gases come out of the fire extinguishers.

(Week 9 Test 2)

Because the pushing force of air from the fire extinguishers pushes the cart forward.

- 3 The body does not move when it is exerted on by balanced forces.

(Week 9 Test 3)

Because the forces that are applied on the body are equal forces.

Q6

What happens if:

- 1 You hit a ball strongly with your foot?

(Alex. (East) 2024)

The ball starts to move.

- 2 We increase the number of fire extinguishers on the cart?

(Week 9 Test 2)

The speed of the cart increases and it covers a long distance.

- 3 Balanced forces act on a static object?

(Beni Suef 2023)

The static object will not move.

Q7

What is meant by each of the following:

- 1 Pushing force

(Week 9 C.W)

It is a force that you use to move an object away from you.

- 2 Pulling force

(Week 9 C.W)

It is a force that you use to move an object towards you.

- 3 Movement (Motion)

(Week 9 H.W)

It is the change in the position of an object relative to a fixed starting point.

- 4 Gravity

(Week 9 H.W)

It is the force that pulls objects down towards the Earth.

Q8 Answer the following questions:

- 1 Give an example of pushing and pulling forces. (Week 9 Test 1)

Pushing force: kicking the ball

Pulling force: gravity pulls objects towards the Earth.

- 2 Mention the state of the body when balanced and other unbalanced forces affect it. (Week 9 Test 2)

Balanced forces: the object will not move.

Unbalanced forces: the object will move towards the greater force.

- 3 Give an example of an easily seen movement and another that cannot be seen. (Week 9 Test 3)

We can see a walking person.

We can't see the revolution (movement) of Earth around the Sun.

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر نوفمبر



SELF-ASSESSMENTS

on Concept (1.3)

Self-Assessment 10 On Lesson 1

1 (A) Put (✓) or (X) :

1. Eyes send information through nerves to the brain for processing them. ()
2. The membrane that presents at the back of cat's eyes depends on sound to detect the prey location. ()
3. Fishing cat has excellent night vision better than human. ()

(B) Give a reason for the following :

The eyes pupils of fishing cat open widely at the low-light places.

.....

2 (A) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Fishing cat	a. depends on touch to hunt.
2. Human	b. has no mirror-like membrane at the back of the eye.
	c. has a mirror-like membrane at the back of the eye.

1.

2.

(B) What happens if ...?

The structure of the fishing cat eye doesn't have a mirror-like membrane.

.....

3 Choose the correct answer :

1. If the human eyes contain a mirror-like membrane like which is found in fishing cat's eyes, then all the following statements are correct, except that human eyes
 - a. seem to glow at night.
 - b. have excellent night vision.
 - c. don't need night vision goggles.
 - d. need a strong source of light to can see at night.
2. In the low-light places, cat's eyes pupils open human's eyes pupils.
 - a. equal to
 - b. smaller than
 - c. narrower than
 - d. wider than
3. Which of the following animals has the ability to fly but can't see clearly at night ?
 - a. Fishing cat.
 - b. Snake.
 - c. Bat.
 - d. Fennec fox.

4. All the following have structural adaptation in their eyes, except
- | | |
|------------------------|------------------|
| a. owls. | b. fishing cats. |
| c. panther chameleons. | d. bats. |

Self-Assessment 11 till Lesson 2

1 (A) Put (✓) or (X) :

1. You can see a green ball inside a transparent glass box. ()
2. Opaque objects allow light to pass through and we can see objects through them. ()
3. In a completely dark room, we can see the transparent objects but opaque objects cannot be seen. ()

(B) Give a reason for the following :

You can see clearly through air.

2 (A) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Water.	a. It is an opaque material, that reflects light in different directions.
2. Glass.	b. It is a source of light energy.
3. Wood.	c. It is a transparent material that is used in making windows.
	d. It is a transparent material which is used for drinking.

1.

2.

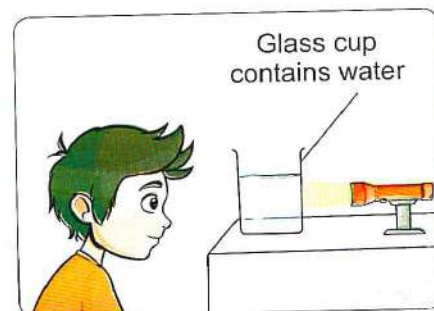
3.

(B) Cross out the odd word :

1. Mirror – Cloth – Paper – Wood sheet. (.....)
2. Wood door – Book – Wall – Glass cup. (.....)

3 Look at the opposite figure, then answer the questions below :

1. Can you see the light from the other side of cup ?
.....
 2. From this activity, we can conclude that
 - a. water and glass are opaque objects.
 - b. water and glass are transparent objects.
 - c. water is an opaque object, while glass is a transparent one.
 - d. glass is an opaque object, while water is a transparent one.
- 



Self-Assessment 12 till Lesson 3

1 (A) Put (✓) or (X) :

1. Firefly beetles form different flash patterns by using their legs. ()
2. Speaking is one of the ways to communicate with people. ()
3. Light energy is not used by humans or firefly beetles for communication. ()

(B) Give a reason for the following :

The wings of firefly beetles play an important role in the communication between them.

.....

.....

2 (A) Correct the underlined words :

1. Changing the flash patterns of firefly beetles is considered as a structural adaptation. (.....)
2. A cell phone is a device that is used in communication between animals. (.....)
3. Reading is a type of communication that depends on the sense of taste. (.....)

(B) How can firefly insects produce light to communicate with each other ?

.....

.....

3 Choose the correct answer :

1. is a type of communication which is used by humans only.
 a. Sound b. Light c. Echolocation d. Cell phone
2. Fireflies depend on sense for communication with each other.
 a. smell b. taste c. hearing d. sight
3. is considered a type of communication used by animals and humans.
 a. Writing b. Displaying light c. Reading d. Cell phone
4. A firefly beetle is a type of
 a. amphibians. b. lizards. c. insects. d. reptiles.

Self-Assessment 13 till Lesson 4

1 (A) Choose the correct answer :

- All of the following use light energy to send codes, except
 - lighthouses.
 - traffic lights.
 - musical instruments.
 - firefly beetles.
- Some living organisms can use light energy in communication such as
 - humans only.
 - firefly beetles only.
 - humans and firefly beetles.
 - bats and firefly beetles.
- The is the only living organism that can use language and speech to communicate with each other.
 - whale
 - owl
 - firefly beetles
 - human

(B) Give a reason for the following :

In cats' eyes the mirror-like membrane cannot make its function in a completely dark room.

2 (A) Put (✓) or (X) :

1. People who are lost in the desert can use mirrors to attract the attention of rescue helicopters.. ()
2. Writing is a type of communication that is used by human only. ()
3. Musical instruments cannot be used to send codes for communication. ()

(B) What happens if ...?

The structure of fishing cat's eyes are like that of human's eyes.

3 Complete the following table using the words below :

(communicate – eyes – flash patterns – light reflection – bodies – hunt – chemical reaction – mirror-like membrane)

Fishing cats	Firefly beetles
1. There is a special structure known as a presents at the back of their 2. This special structure of their eyes causes and helps them to at night.	1. They produce light, due to the occurrence of a inside their 2. They use their wings to form different that help them to at night.

SELF-ASSESSMENTS

on Concept (2.1)

Self-Assessment 14 On Lesson 1

1 (A) Put (✓) or (X) :

1. The engine of a normal truck is the same engine of a rocket. ()
2. Engineers use the same idea of rocket design in stopping the Shockwave truck. ()
3. You need energy to make a force to move a chair from one place to another. ()

(B) Give a reason for the following :

By increasing the number of fire extinguishers,
the distance that the cart moves will increase.



2 (A) Choose from column (B) what suits it in column (A) :

(A)	(B)
1. Normal engine	a. is used in stopping both of the Shockwave truck and rockets.
2. Jet engine	b. is used in moving a normal truck.
3. Parachute	c. is used to stop a normal truck.
	d. is used in moving the Shockwave truck.

1.

2.

3.

(B) Which is faster, a normal truck or the Shockwave truck ?

(Give a reason for your answer).

.....

.....

3 This picture represents one of the most powerful and fastest trucks in the world :

1. What is the name of this truck ?

.....

2. What happens if the three jet engines of this truck are replaced by the engine of a normal truck ?

.....

.....



Self-Assessment 15 till Lesson 2

1 (A) Choose the correct answer :

1. A book is placed on a table is affected by
 - a. gravity pulling force only.
 - b. table pushing force only.
 - c. table pulling force and gravity pushing force.
 - d. table pushing force and gravity pulling force.
2. When you sit on a chair which of the following sentences is correct ?
 - a. gravity pulling you upward.
 - b. gravity pulling you downward.
 - c. chair pulling you upward.
 - d. chair pushing you downward.
3. We can see all the following motions, except
 - a. the rotation of Earth around the Sun.
 - b. a person crossing the road.
 - c. a person riding a bicycle.
 - d. a person swimming in the sea.

(B) What is meant by ...?

Motion

.....

.....

2 (A) Correct the underlined words :

1. To move up any object from the ground, the pulling force of your hand must be smaller than the pulling force of the gravity. (.....)
2. In tug-of-war game, the winner team is the team with the weaker force. (.....)
3. You can stop the ball that is thrown toward you by the pulling force of your hands against the ball movement. (.....)

(B) Give a reason for the following :

Parachutes are used in the Shockwave truck and rocket .

.....

November Tests

Total mark

15

Model 1

1 (A) Choose the correct answer :

(5 marks)

- Which of the following allows light to pass through it ?
a. Metal. b. Moon. c. Mirror. d. Lenses.
- All the following signals are information that the eyes receive, except
a. green traffic light. b. fire alarm.
c. signal fires. d. rescue flare.
- When you move something away from you, this represents
a. pushing force. b. light energy.
c. pulling force. d. sound energy
- When an object is in motion, this means that its changes.
a. color b. shape c. size d. position

(B) Give a reason for the following :

Wood is considered as an opaque material.

.....

2 (A) Put (✓) or (X) :

(5 marks)

- The firefly beetle is considered as a type of reptiles. ()
- You can see objects behind glass window as it is an opaque object. ()
- The stopping object can't move until a force acts on it. ()
- When a car crashes into a wall, it will not stop. ()

(B) What happens if ...?

A car runs out of fuel on a flat road.

.....

3 (A) Write the scientific term of each of the following :

(5 marks)

- It is a visible form of energy that travels in the form of waves. (.....)
- It is a force that is exerted when objects rub against each other. (.....)
- It is a pattern that has meaning. (.....)
- The force that pulls objects down toward the Earth. (.....)

(B) Arrange the following statements to show how we can see objects around us :

(.....) The light rays bounce off the object then reach into our eyes.

(.....) The electric lamp emits its own light.

(.....) The light rays fall on object in the form of waves.

Model 2

Total mark

15

1 (A) Complete the following sentences :

(5 marks)

1. Glass is considered from materials, while wood is considered from materials.
2. If you throw a ball through the air, it is affected by the force of your hand and the force of the Earth's gravity.
3. When light rays fall on rough surface, they will at directions.
4. Fireflies communicate with each other by producing a reaction inside their bodies that allow them to up.

(B) What happens to ...?

Light rays fall on a mirror.

2 (A) Correct the underlined words :

(5 marks)

1. The eye pupil in human eyes open wider than that in the nocturnal animals. (.....)
2. Moon can emit its own light. (.....)
3. The balanced forces cause the object to move. (.....)
4. The motion of a car is opposed by the gravity of air. (.....)

(B) What happens if ...?

The Shockwave driver opens the parachutes.

3 (A) Put (✓) or (X) :

(5 marks)

1. Red and green traffic lights are considered as codes. ()
2. Friction force always slows down or stops the motion of moving objects. ()
3. Unbalanced forces cause a change in the object position. ()
4. A normal truck is faster than the Shockwave truck. ()

(B) Give a reason for the following :

When you kick a ball laying on the ground, it moves.

1 (A) Write the scientific term of each of the following :**(5 marks)**

1. Materials that allow light to pass through them. (.....)
2. The time taken by the body to receive information from the environment. (.....)
3. The force that makes objects move away from you. (.....)
4. A change in the position of an object relative to a fixed starting point. (.....)

(B) What happens when ...?

Light falls on a smooth surface such as a mirror.

.....

2 (A) Choose the correct answer :**(5 marks)**

1. Light travels in lines in the form of waves.
a. curved b. zigzag c. straight d. circular
2. Reading and writing are common types of communication in world.
a. humans b. animals c. birds d. plants
3. Which of the following will cause an object to move ?
a. Balanced force. b. Unbalanced forces.
c. Sound energy. d. Light energy.
4. The work done is equal to the amount of transferred by a force that is used to move an object.
a. energy b. friction c. pushing d. gravity

(B) Define :

Code :

3 (A) Complete the following sentences using the words below :**(5 marks)**

(mirror-like membrane – air – friction – position)

1. Water and are transparent materials.
2. The force that slows down or stops motion is called
3. All cats have at the back of their eyes.
4. A force must act on a ball to start motion, so the of the ball will change.

(B) Give an example of :

1. Pushing force :
2. Pulling force :

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر نوفمبر



5
Marks

1 All of the following are signals that are received by eyes, except

- 2 When the box you move is away from you, this represents

- 3 You can see the movement of the following objects, except

- a) the sea waves b) the rotation of planets around the Sun
- c) a running horse d) a flying airplane

- 4 All of the following are sources of light, except

- a) candles b) stars c) electric lamps d) moon

1 A tool used by humans to be able to see in dim light. (.....)

- 2 The force that pulls objects towards the Earth's surface. (.....)

- 3 It is a push or pull that is applied to an object, causes it to change its position. (.....)

- 4 The change in an object's position relative to a fixed point. (.....)

3 Answer the following questions:

- 1 Give a reason for why fireflies use different flashlight patterns to communicate with each other.

- 2** What happens when unbalanced forces are applied on a static object?

Model (2)

5
Marks

1 Complete the following sentences from the two brackets:

1 Both humans and animals use to communicate.

(smell – light)

2 By increasing the kinetic energy of an object. It travels a distance.

(shorter – longer)

3 When a player kicks a ball, and this ball moves, this means that is done.

(force – work)

4 The eye pupil of the fishing cat opens than yours in dim light. (narrower – wider)

2 Correct the underlined word:

1 The nose receives the light codes and sends them to the brain. (.....)

2 Objects in motion have no energy. (.....)

3 Air resistance acts in the same direction of the car motion. (.....)

4 Light moves in curved lines. (.....)

3 Answer the following questions:

1 How can we state that an object is in motion?

- •

2 What happens when the forces acting on the rope of a tug-of-war game are balanced?

- •

Model (3)

5
Marks

1 Complete the following sentences:

- 1 Fireflies produce light through a
- 2 When a girl pushes her ball down, the gravity acts on the ball is in the direction.
- 3 By increasing the speed of a car, it covers a distance.
- 4 When light strikes a smooth mirror, it is reflected in direction.

2 Put (✓) or (X):

- 1 Rescue flares send codes that tell the sailors where they are. ()
- 2 A book on a table doesn't move until force acts on it. ()
- 3 The car finally stops if it runs out of gas due to the friction force. ()
- 4 When a kid pulls his bag upwards, the gravity pulls it upwards too. ()

3 Answer the following questions:

- 1 What happens when a kid kicks a ball at rest?

.....

- 2 What happens when unbalanced forces are applied to a ball?

.....

Model (4)

5
Marks

1 Choose from column (B) what suits from column (A):

(A)	(B)
1. Fireflies communicate with each other	a) can communicate using sound.
2. A box needs to move	b) by producing light.
3. The ball moves for a short distance	c) unbalanced forces.
4. Humans and animals both	d) when gentle force applied to it.

1. 2. 3. 4.

2 Put (✓) or (X):

- 1 Different languages have similar codes. ()
- 2 Friction force increases the speed of a moving object. ()
- 3 Energy must be exerted to do work. ()
- 4 When opposite, unbalanced forces are applied to a static object, the object moves in the direction of the greater one. ()

3 Answer the following questions:

- 1 When a kid pushes a box and the box doesn't move, so no work is done. Why?

-

- 2 What happens if a boy riding a bicycle stops pedaling?

-

5
Marks

1 Reading and writing are methods of communication used by

- 2 When a ball stands on the ground without moving, the forces acting on it are

- 3** The moon isn't a source of light, because

- 4 Shadows are formed when the light rays fall on all of the following objects, except

- 2 Cross out the odd word:**

- 1 Music – Thumb up – Facial expressions – Writing. ()

- 2 A running kid - Leaves move by the wind – Water falling – Rotation of the moon around the Earth. (.....)

- 3 Football player kicks a ball - A fisherman pulled the fishing hook – Closing the desk drawer –
A goal keeper pushes the ball to stop. (.....)

- 4 Clothes – Paper – Mirror – Wood. ()

3 Answer the following questions:

- ## 1 What is a code?

- 2** Why is the shockwave truck is the fastest truck in the world?

5
Marks

1 All of the following are signals that are received by eyes, except

- 2 When the box you move is away from you, this represents

- 3 You can see the movement of the following objects, except

- 4 All of the following are sources of light, except

- a) candles b) stars c) electric lamps d) moon

1 A tool used by humans to be able to see in dim light. (**Night vision goggles**)

- 2 The force that pulls objects towards the Earth's surface. (Gravity)

- 3 It is a push or pull that is applied to an object, causes it to change its position. (**Force**)

- 4 The change in an object's position relative to a fixed point. (**Motion**)

3 Answer the following questions:

- 1 Give a reason for why fireflies use different flashlight patterns to communicate with each other.

- **To warn off their predators or to attract their mates**

- 2** What happens when unbalanced forces are applied on a static object?

- **It moves in the direction of the greater force**

Model (2)

5
Marks

1 Complete the following sentences from the two brackets:

1 Both humans and animals use to communicate.

(smell – **light**)

2 By increasing the kinetic energy of an object. It travels a distance.

(shorter – **longer**)

3 When a player kicks a ball, and this ball moves, this means that is done.

(force – **work**)

4 The eye pupil of the fishing cat opens than yours in dim light. (narrower – **wider**)

2 Correct the underlined word:

1 The nose receives the light codes and sends them to the brain.

(**eye**)

2 Objects in motion have no energy.

(**at rest**)

3 Air resistance acts in the same direction of the car motion.

(**opposite**)

4 Light moves in curved lines.

(**straight**)

3 Answer the following questions:

1 How can we state that an object is in motion?

- **When the position of the object changes relative to a fixed starting point.**

2 What happens when the forces acting on the rope of a tug-of-war game are balanced?

- **The rope will not move.**

Model (3)

5
Marks

1 Complete the following sentences:

- 1 Fireflies produce light through a**chemical reaction**.....
- 2 When a girl pushes her ball down, the gravity acts on the ball is in the**same**..... direction.
- 3 By increasing the speed of a car, it covers a**longer**..... distance.
- 4 When light strikes a smooth mirror, it is reflected in**one**..... direction.

2 Put (✓) or (X):

- 1 Rescue flares send codes that tell the sailors where they are. (✓)
- 2 A book on a table doesn't move until force acts on it. (✓)
- 3 The car finally stops if it runs out of gas due to the friction force. (✓)
- 4 When a kid pulls his bag upwards, the gravity pulls it upwards too. (X)

3 Answer the following questions:

- 1 What happens when a kid kicks a ball at rest?

- **The energy from the kid's leg transfers to the ball, then the ball has energy and moves.**

- 2 What happens when unbalanced forces are applied to a ball?

- **The ball could start moving, move faster or slower, or change its direction.**

Model (4)

5
Marks

1 Choose from column (B) what suits from column (A):

(A)	(B)
1. Fireflies communicate with each other	a) can communicate using sound.
2. A box needs to move	b) by producing light.
3. The ball moves for a short distance	c) unbalanced forces.
4. Humans and animals both	d) when gentle force applied to it.

1. (b) 2. (c) 3. (d) 4. (a)

2 Put (✓) or (X):

- 1 Different languages have similar codes. (X)
- 2 Friction force increases the speed of a moving object. (X)
- 3 Energy must be exerted to do work. (✓)
- 4 When opposite, unbalanced forces are applied to a static object, the object moves in the direction of the greater one. (✓)

3 Answer the following questions:

- 1 When a kid pushes a box and the box doesn't move, so no work is done. Why?
- **Because the pushing force doesn't cause the box to move a distance and no change happens.**
- 2 What happens if a boy riding a bicycle stops pedaling?
- **The friction force between the tires and the ground decreases its speed gradually until it stops.**

5 Marks

1 Reading and writing are methods of communication used by

- 2 When a ball stands on the ground without moving, the forces acting on it are

- 3** The moon isn't a source of light, because

- 4 Shadows are formed when the light rays fall on all of the following objects, except

- 2 Cross out the odd word:**

- 1 Music – Thumb up – Facial expressions – Writing. (**Music**)

- 2 A running kid - Leaves move by the wind – Water falling – Rotation of the moon around the Earth.

(Rotation of the moon around the Earth)

- 3 Football player kicks a ball - A fisherman pulled the fishing hook – Closing the desk drawer –

A goal keeper pushes the ball to stop. (**A fisherman pulled the fishing hook**)

- 4 Clothes – Paper – Mirror – Wood. (Mirror)

3 Answer the following questions:

- ## 1 What is a code?

- It is a pattern that has a meaning.

- 2** Why is the shockwave truck is the fastest truck in the world?

- **Because it has 3 jet airplanes engines.**

حمل الآن

مجاناً وحصرياً

المراجعة رقم (5)

اختبار شهر نوفمبر





Question 1

choose the correct answer

Concept 1.3

1 Hossam wants to make a box to see its contents from the outside, which of the following materials will be use?

- (a) Cardboard (b) transparent glass
(c) opaque plastic (d) wood

2 Light travels in.....lines

- (a) Zigzag (b) Straight (c) Circular (d) curved

3 The process of vision occurs as a result ofof light

- (a) Scattering (b) Reflection (c) Absorption (d) refraction

4 Which of the following materials reflect light best?

- (a) Wood (b) Cloth (c) Mirrors (d) rock

5 Light is a form of.....

- (a) Energy (b) Work (c) Matter (d) wave

6 Which of the following is an opaque object?.....

- (a) Wood (b) Water (c) air (d) glass

7 When light falls on a mirror, it.....

- (a) Reflected (b) Refracted (c) scattered (d) transmited

8 From natural sources of light.....

- (a) Sun (b) Moon (c) Candle (d) Candels

9 Fireflies can communicate with each other through.....

- (a) Sound (b) Light (c) Play (d) Oder

10 Fireflies are found on trees.

- (a) Acacia (b) Kapok (c) Mangroves (d) palm

11 Fireflies are used..... to release flashes

- (a) Her ear (b) Her eye (c) Her wings (d) Her nose





12 Raising the thumb - up or down is a type of.....

- (a) sounds (b) Code (c) Lights (d) orders

13is considered as a pattern that have meaning

- (a) Orders (b) Code (c) Lights (d) sounds

14 All of the following are forms of codes, except.....

- (a) thumb up (b) faces expressions
(c) Writing (d) swimming

15 Sense organs collect information and send signals to..... for processing and understanding

- (a) Hands (b) Legs
(c) Brain (d) stomach

16 Reading and writing are common types of communication inworld

- (a) Humans (b) Animals
(c) Birds (d) plants

17 Metal and wood are..... materials

- (a) Opaque (b) Transparent
(c) Liquids (d) gaseous

18 Animals can communicate with each other through.....

- (a) sound and light (b) eating
(c) Writing (d) reading

19 A firefly is not a bird, but it is a type of.....

- (a) Amphibians (b) Lizards
(c) Beetles (d) reptiles

20 When increasing the engine power the speed will.....

- (a) Increase (b) Decrease
(c) not change (d) non above

Concept 1.2





- 21 leaf blowing due to the force of..... the air
 (a) Pushing (b) Pulling
 (c) Friction (d) gravity
-
- 22 the parachutes supplied to the jet help reduce its
 (a) Speed (b) Size
 (c) Volume (d) shape
-
- 23 To move a car more quickly, you mustthe engine pushing power.
 (a) Reduce (b) Increase
 (c) Decrease (d) same
-
- 24 When an object is in motion, this means that itschanges
 (a) Color (b) Shape
 (c) Size (d) position
-
- 25 All the following motions occur by the effect of pulling force, except.....
 (a) kicking a ball (b) opening a closed drawer
 (c) wearing your socks (d) lifting up a bag from the ground
-
- 26 When you move something toward you, this represents.....
 (a) pushing force (b) light energy
 (c) pulling force (d) sound energy.
-
- 27 The speed of a normal truck is more than that of.....
 (a) a jet airplane only (b) a jet airplane and a rocket
 (c) a rocket and a bicycle (d) a bicycle only
-
- 28 Parachutes are used in the Shockwave truck to.....
 (a) increase its speed. (b) decrease its speed
 (c) keep its speed as it is (d) change its direction
-
- 29 In the Shockwave truck, the three jet engines.....
 (a) don't affect its speed (b) decrease its speed
 (c) stop its motion (d) increase its speed
-





30 Which of the following is an example of unbalanced forces?.....

- (a) Two children push a box with the same force in opposite directions
- (b) Two children play on a seesaw without its moving up or down.
- (c) Two children play on a seesaw, that moves up and down
- (d) Two teams play the tug-of-war game while the rope doesn't move

31 All of the following are examples of motion, except.....

- (a) a running person.
- (b) a ball travelling through the air
- (c) a flying bird.
- (d) a sleeping dog

32 Two equal forces act at the same time on a stopping object but in opposite directions. Which sentence describes the object's state?.....

- (a) The object stays in its place without moving
- (b) The object speed decreases
- (c) The object speed doesn't change
- (d) The object speed increases

33 You can see the movement of the following objects, except the movement of.....

- (a) a flying airplane.
- (b) a running horse
- (c) sea waves
- (d) the planet Earth

34 Gravity is a force that.....

- (a) pushes objects down toward the Earth
- (b) pulls objects down toward the Earth.
- (c) pushes objects toward the sky
- (d) pulls objects toward the sky.

35 The force that occurs when an object rubs against another object is called.....

- (a) Friction
- (b) Gravity
- (c) Push
- (d) pull





- 36** The force that tries to stop an object moving on a surface is called.....
- (a) Gravity (b) Friction
(c) Push (d) pull
-
- 37** There is a..... force between the car tires and the road that acts to decrease car's speed gradually
- (a) Gravity (b) Pulling
(c) Pushing (d) friction
-
- 38** Which of the following sentences describes the friction force ?.....
- (a) It pulls objects toward the ground
(b) It pushes objects away from the ground
(c) it slows down or stops objects in motion
(d) It doesn't affect objects in motion.
-
- 39** All of the following examples can move by a pushing force, except.....
- (a) a ball (b) a swing.
(c) tug-of-war rope (d) a car
-
- 40** To stop a moving object we can apply aagainst it.
- (a) pushing force (b) gravity force
(c) sound energy (d) light energy
-
- 41** When you throw a ball in the air, the gravity will make it moveupward
- (a) Upward (b) Forward
(c) Downward (d) backward
-

Question 2

Put (true) or (false) answers

Concept 1.3



- | | | |
|----|---|-----|
| 1) | Light travels in straight lines | () |
| 2) | The ear is the sense organ responsible for seeing objects | () |





3)	The sun and the moon are sources of light	()
4)	Objects can be seen due to the absorption of light	()
5)	Smooth surfaces reflect light better than rough surfaces	()
6)	Nocturnal animals have larger eyes than humans.	()
7)	Rough objects reflect light better than smooth ones	()
8)	The moon is not a source of light	()
9)	Shadow formed when light hits transparent object	()
10)	Wood is a transparent object that allows light to pass through it	()
11)	Opaque materials don't allow light to pass through	()
12)	Speaking, writing are ways to communicate with people	()
13)	Human use light to communicate such as using traffic light	()
14)	Human can see in dim light as well as in bright light if his eyes contain a mirror-like membrane	()
15)	Different languages have similar codes.	()
16)	A cell phone is a device that is used in communication between animals.	()



Concept 2.1

17)	Objects do not move if no force affects them	()
18)	The body is static when it moves from one place to another.	()
19)	The engine of the jet plane is weaker than the engine of the car	()





20)	The movement of the planets can be seen in the sky	()
21)	To open or close a door, we have to push or pull it	()
22)	Putting on a pair of socks needs a pushing force	()
23)	You need energy to push a car forward or backward	()
24)	A car can move faster than a bicycle	()
25)	A normal truck can move faster than a jet airplane	()
26)	The three jet engines in the Shockwave truck allow it to fly	()
27)	If the two teams in the tug-of-war game are pulling the rope with equal forces, the rope will move toward one of the two teams	()
28)	Unbalanced forces cause a change in the object position	()
29)	If one team in the tug-of-war game pulls the rope with a greater force, the rope will move toward the team with the smaller force	()
30)	Sometimes it is easy to observe the force that stops an object	()
31)	When a car runs out of fuel on a flat road, its speed increases gradually until it stops.	()
32)	Friction force always slows down or stops the motion of moving objects	()
33)	The motion of an object on the ground is affected by a friction force	()
34)	Hard push causes an object to travel for a longer distance	()
35)	If a person moves a table through a distance, there is a work done.	()
36)	Lifting a book upward needs more energy than pushing a truck	()





37)	If you try to open a door but you cannot open it, this means that work is done	()
38)	Hitting a tennis ball needs a pulling force	()

Question 3

Complete the following sentences

Concept 1.3

1)	 is an opaque object	
2)	 Is a transparent object	
3)	All cats have aat the back of their eyes	
4)	Any object that give off its own light is called	
5)	The eyes of fishing cat have a mirror-like membrane bounces off the light , and this is considered as a a daptation	
6)	The Is the main control center in humans and animals bodies , while..... Are considered the organ of sight in their bodies	
7)	Light travels in Lines	
8)	 And are sources of light	
9)	The eye pupil of the owl and fishing cats is Than the eye pupil of human	
10)	Smooth surfaces reflect light in direction	
11)	Rough materials reflect light than smooth materials	
12)	 is not considered as a natural source of light	





- 13) Hand signals are a type of
- 14) Fire flies communicate with each other through.....
- 15) Light is produced as a result of inside the body of the fireflies
- 16) Fireflies use the sense of to communicate



- 17) The body whose position does not change is in a.....state.

Concept 2.1

- 18) causes the movement of static bodies.
- 19) The fastest truck in the world is the..... truck.
- 20) Kicking the ball is considered as a..... force.
- 21) The SHOCKWAVE truck is stopped by.....
- 22) Opening the door handle isforce.
- 23) The SHOCKWAVE truck supplied with.....parachutes
- 24) The speed of trucks different according to.....
- 25) A moving object is acted by..... forces while the body at rest is acted byforce
- 26) When playing pulling a rope game , if each team pulls the rope with equal force , the forces are
- 27) To move anything from one place to another you need to It , or it
- 28) In the shockwave truck, engineers put three in it to increase it speed , and they installed three To stop it





29)	The idea of stopping the shockwave truck is the same idea of stopping a moving
30)	It is the ability to do work and it can change from one form to another is called
31)	There are two forces that affect on moving object which are and pulling forces
32)	Any object moves from its place when the forces acting on it are
33)	The force that pulls things down to the ground is
34)	Friction is a force that The motion direction

Question 4

Write what the following sentence indicate

Concept 1.3

1)	The organ affected by light and responsible for vision	()
2)	Materials that allow light to pass through them	()
3)	Objects through which light is emitted	()
4)	Materials that cannot be seen through	()
5)	A pattern that have meaning	()
6)	A device you can use to see in the dark	()
7)	A typer of wild cats , that have eyes glow at nights	()
8)	A body that appears lighted in the sky ,but it is not considered as a source of light	()
9)	They are materials reflects the light in one direction	()
10)	They are materials reflects the light in difference directions	()
11)	The object which allows light to pass through it	()





12)	It is a visible form of energy that travels in form of waves	()
13)	The structural adaptation that gives fishing cat an excellent night vision	()
14)	Sense organ that can detect sound energy	()
15)	Sense organa that can detect light energy	()

Concept 2.1

16)	A force that you males to move an object toward you	()
17)	A force that you make to move an object away from you	()
18)	One of the fastest and most powerful trucks in the world	()
19)	It is a push or pull that is applied to an object cause it to change its position	()
20)	A change in the position of an object relative to fixed strating point	()
21)	The force the pulls objects down toward the earth	()
22)	It is a force that is exerted when objects rub against each other	()
23)	It is a force that slow down the motion of moving objects	()
24)	The force that is used in tug-of war game	()
25)	It is force that is exerted when objects rub against each other	()





Question 5

Give reason for the following

Concept 1.3

1) Fishing cat eyes glow in the dark

.....

.....

2) Nocturnal animals can see better at night.

.....

.....

3) Sun is considered a source of light

.....

.....

4) Moon is not considered as a source of light

.....

.....

5) We can see objects when light fall on it

.....

.....

6) The moon is not a source of light.

.....

.....

7) Humans sometimes use codes.

.....

.....

8) Fireflies produce different pattern of flash light

.....

.....

9) Fireflies produce a chemical reaction inside their bodies

.....

.....

10) You can see an object placed behind a glass cup

.....

.....

Concept 1.2





عَافِر
لِجَدِّهَا
تَوَصَّل

11) The car starts moving when the gases come out of the fire extinguishers.?

-
-

12) The Shockwave truck is faster than the normal truck

-
-

13) Engineers use parachutes in the Shockwave truck designs

-
-

14) When you kick a ball laying on the ground, it moves

-
-

15) When two equal pushing forces act on an object in opposite directions, the object doesn't move

-
-

16) If you let a pen out of your hand, it falls to the ground.

-
-

17) When your friend catches a ball that is thrown in the air, the motion of the ball is stopped.

-
-

18) When your toy car crashes into a wall, it will stop moving

-
-

19) When you stop pedalling during the movement of your bicycle, it slows down until it stops.

-
-

20) If you push two similar toy cars on the same ground, one of them may travel for a longer distance than the other.

-
-





21) If the same force acts on a small car and a truck, the small car will travel for a longer distance than the truck.

-
-

Question 6

What happen when

Concept 1.3

1. Light fall on a rough surface such as wood

-
-

2. Light fall on a smooth surface such as mirror

-
-

3. The backcountry hikers do not have mirrors

-
-

أنت شخص جامد ورايق
ومفيش أي داعي تتضايق

4. The codes have no meaning

-
-

5. Fireflies did not emit flashes

-
-



6. The fishing cat eye don't have mirror-like membrane

-
-

7. Light fall on transparent objects

-
-

8. When firefly wants to attract a mate to reproduce

-
-

9. The moon can't reflect sunlight

-
-





Concept 2.1

10. Increase the number of fire extinguishers on the car?

-
-

11. The moon can't reflect sunlight

-
-

12. The traffic light becomes red while you are going to cross the road

-
-

13. You kick a stopped ball on the ground

-
-

14. Engineers placed Jet engines inside a normal truck instead of its normal engine

-
-

15. The shockwave driver opens the parachutes

-
-

16. The pulling forces of the two teams are equal in the tug-of-war game

-
-

17. A car runs out of fuel on a road

-
-

18. A forces that are acting on the rope of tug-of-war game are balanced

-
-

اطمنن ..
هناك نور في نهاية النفق استني
كده



لا دي تريا لا داخله علينا اجري..





Question 7

Vairous questions

Concept 1.3

1) Explain how bats communicate with each other?

.....
.....

2) Mention an example of behavioral adaptation in Fireflies

.....
.....

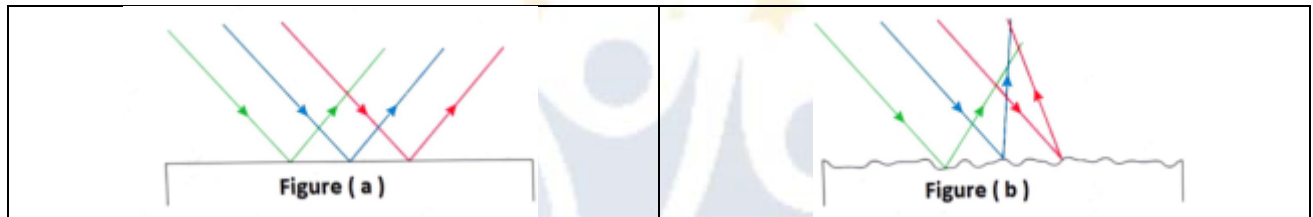
3) Mention one benefit of flashes emitted by fireflies.

.....
.....

4) Mention two examples of codes used by humans in their daily life.

.....
.....

5) Look at the following figures, then answer the questions below:



A) Which Surface represents reflection of light rays from mirror?

.....

B) Light travel in Lines



أنا بس حبيت أفكر
إنك عدت باوقات
كثير اصعب من كذا
وعدت على خير،
ودي كمان هتعدى
على خير إتطمئن
ومتقلقش كله هيبقى
كويس.



Concept 2.1

1) Look at the following pictures, then complete the following sentences



Picture (1): Normal truck



Picture (2): Jet airplane

1. The engine of picture is much powerful than the engine of picture
2. When the engines of picture are placed in the picture it will turn into the Shockwave truck.
3. The engines that are used in picture are the same engines that are used in the Shockwave truck.

2) Write the type of force that is used in each of the following situations



1.



2.



3.



4.

هي النية كانت "قف على ناصية الحلم وقا تل"
بس منن عارف ليه اتحولت
لأقعدن على الطريق وأشتكي

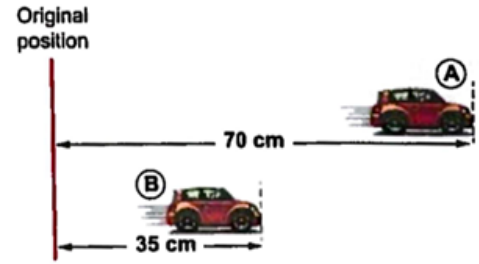




The following figure shows two similar toy cars are pushed to move on the same floor, study the figure then answer the questions below

1. Which of these two cars is affected by a greater force ?

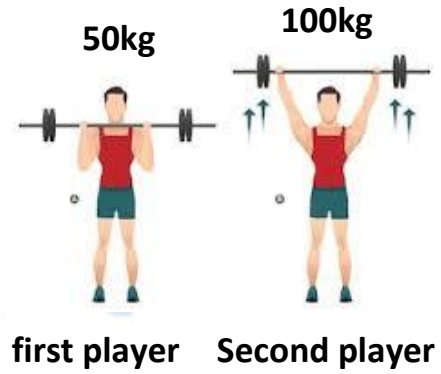
(Give a reason for your answer)



-
-

- 3) In the opposite figure, which of the two players does more work to raise the weights ?

(Give a reason for your answer)



-
-
-

مراجعات النخبة

ازيك!



خليك دائماً فخور بنفسك
وبمشوارك مهما كانت
خطواتك صغيرة، خليك فخور
بقدرتك انك تفعل وتقوم
تكمل، خليك فخور انك لسه
بتحاول وتعافى رغم كل
الصعوبات اللي بتعبر عليك.





نقعات النقة

MODEL EXAM (1)

1) CHOOSE THE CORRECT ANSWER

1. Light travel inlines
 (a) **Zigzag** (b) **Straight** (c) **circular**
2. Which of the following materials reflect light best ?
 (a) **Wood** (b) **Cloth** (c) **Mirror**

2) PUT (✓) OR (×) IN THE FRONT IN EACH OF THE FOLLOWING

1)	Object can be seen due to the absorption of light	()
2)	The engine of the jet plane is weaker than the engine of car	()

3) WRITE SCIENTIFIC TERM

1)	The force that make object move away from you	()
2)	Animals communicate with with each other by flashing (lighting)	()

4) GIVE REASON FOR

1. The moon is not considered a source of light
 •
2. The body does not move when it is exerted by balanced force ?
 •

5) MENTION ONE EXAMPLE FROM EACH OF THE FOLLOWING

1. Pushing and pulling force
 •
2. Codes used by human in daily life
 •





MODEL EXAM (2)

1) CHOOSE THE CORRECT ANSWER

1. From the opaque objects
 - (a) Carton
 - (b) Glass
2. All of the following is considered pulling force , except
 - (a) Kicking a ball
 - (b) Pulling the rope
 - (c) Opening the desk's drawer
 - (d) Dragging a car toy

2) PUT (✓) OR (×) IN THE FRONT IN EACH OF THE FOLLOWING

1)	When a pen falls down from your hand, then the acting force is the gravity force	()
2)	The ear is the sense organ which is responsible for seeing objects	()

3) WRITE SCIENTIFIC TERM

1)	Something that emits its own light	()
2)	One of the fastest and powerful trucks in the world	()

4) GIVE REASON FOR

1. The fishing cat's eye seem to glow at the dark
 -
 -
2. If you let a pen out of your hand, it falls to the ground
 -
 -

5) MENTION ONE EXAMPLE FROM EACH OF THE FOLLOWING

1. Example of source of light
 -
 -
2. Code or way of communication firefly beetles use
 -
 -





Question 1

choose the correct answer

Concept 1.3

1. Hossam wants to make a box to see its contents from the outside, following materials will be use?
 - (a) Cardboard
 - (b) transparent glass
 - (c) opaque plastic
 - (d) wood
2. Light travels in.....lines
 - (a) Zigzag
 - (b) Straight
 - (c) Circular
 - (d) curved
3. The process of vision occurs as a result of of.....of light
 - (a) Scattering
 - (b) Reflection
 - (c) Absorption
 - (d) refraction
4. Which of the following materials reflect light best?
 - (a) Wood
 - (b) Cloth
 - (c) Mirrors
 - (d) rock
5. Light is a form of.....
 - (a) Energy
 - (b) Work
 - (c) Matter
 - (d) wave
6. Which of the following is an opaque object?.....
 - (a) Wood
 - (b) Water
 - (c) air
 - (d) glass
7. When light falls on a mirror, it.....
 - (a) Reflected
 - (b) Refracted
 - (c) scattered
 - (d) transmited
8. From natural sources of light.....
 - (a) Sun
 - (b) Moon
 - (c) Candle
 - (d) Candels
9. Fireflies can communicate with each other through.....
 - (a) Sound
 - (b) Light
 - (c) Play
 - (d) Oder
10. Fireflies are found on trees.....
 - (a) Acacia
 - (b) Kapok
 - (c) Mangroves
 - (d) palm
11. Fireflies are used..... to release flashes
 - (a) Her ear
 - (b) Her eye
 - (c) Her wings
 - (d) Her nose
12. Raising the thumb - up or down is a type of.....
 - (a) sounds
 - (b) Code
 - (c) Lights
 - (d) orders
13.is considered as a pattern that have meaning
 - (a) Oders
 - (b) Code
 - (c) Lights
 - (d) sounds
14. All of the following are forms of codes, except.....
 - (a) thumb up
 - (b) faces expressions
 - (c) Writing
 - (d) swimming





15. Sense organs collect information and send signals to..... for processing and understanding
- (a) **Hands** (b) **Legs**
(c) **Brain** (d) **stomach**
16. Reading and writing are common types of communication inworld
- (a) **Humans** (b) **Animals**
(c) **Birds** (d) **plants**
17. Metal and wood are..... materials
- (a) **Opaque** (b) **Transparent**
(c) **Liquids** (d) **gaseous**
18. Animals can communicate with each other through.....
- (a) **sound and light** (b) **eating**
(c) **Writing** (d) **reading**
19. A firefly is not a bird, but it is a type of.....
- (a) **Amphibians** (b) **Lizards**
(c) **Beetles** (d) **reptiles**

19. When increasing the engine power the speed will.....

- (a) **Increase** (b) **Decrease**
(c) **not change** (d) **non above**

Concept 2.1

20. leaf blowing due to the force of..... the air

- (a) **Pushing** (b) **Pulling**
(c) **Friction** (d) **gravity**

21. the parachutes supplied to the jet help reduce its

- (a) **Speed** (b) **Size**
(c) **Volume** (d) **shape**

22. To move a car more quickly, you mustthe engine pushing power.

- (a) **Reduce** (b) **Increase**
(c) **Decrease** (d) **same**

20. When an object is in motion, this means that itschanges

- (a) **Color** (b) **Shape**
(c) **Size** (d) **position**





21. All the following motions occur by the effect of pulling force, except.....
- (a) kicking a ball (b) opening a closed drawer
(c) wearing your socks (d) lifting up a bag from the ground
22. When you move something toward you, this represents.....
- (a) pushing force (b) light energy
(c) pulling force (d) sound energy.
23. The speed of a normal truck is more than that of.....
- (a) a jet airplane only (b) a jet airplane and a rocket
(c) a rocket and a bicycle (d) a bicycle only
24. Parachutes are used in the Shockwave truck to.....
- (a) increase its speed. (b) decrease its speed
(c) keep its speed as it is (d) change its direction
25. In the Shockwave truck, the three jet engines.....
- (a) don't affect its speed (b) decrease its speed
(c) stop its motion (d) increase its speed
26. Which of the following is an example of unbalanced forces?.....
- (a) Two children push a box with the same force in opposite directions
(b) Two children play on a seesaw without its moving up or down.
(c) Two children play on a seesaw, that moves up and down
(d) Two teams play the tug-of-war game while the rope doesn't move
27. All of the following are examples of motion, except.....
- (a) a running person. (b) a ball travelling through the air
(c) a flying bird. (d) a sleeping dog
28. Two equal forces act at the same time on a stopping object but in opposite directions. Which sentence describes the object's state?.....
- (a) The object stays in its place without moving
(b) The object speed decreases
(c) The object speed doesn't change
(d) The object speed increases
29. You can see the movement of the following objects, except the movement of.....
- (a) a flying airplane. (b) a running horse
(c) sea waves (d) the planet Earth





30. Gravity is a force that.....

- (a) pushes objects down toward the Earth
- (b) pulls objects down toward the Earth.
- (c) pushes objects toward the sky
- (d) pulls objects toward the sky.

31. The force that occurs when an object rubs against another object is called.....

- (a) Friction
- (b) Gravity
- (c) Push
- (d) pull

32. The force that tries to stop an object moving on a surface is called.....

- (a) Gravity
- (b) Friction
- (c) Push
- (d) pull

33. There is a..... force between the car tires and the road that acts to decrease car's speed gradually

- (a) Gravity
- (b) Pulling
- (c) Pushing
- (d) friction

34. Which of the following sentences describes the friction force ?.....

- (a) It pulls objects toward the ground
- (b) It pushes objects away from the ground
- (c) it slows down or stops objects in motion
- (d) It doesn't affect objects in motion.



35. All of the following examples can move by a pushing force, except.....

- (a) a ball
- (b) a swing.
- (c) tug-of-war rope
- (d) a car

36. To stop a moving object we can apply aagainst it.

- (a) pushing force
- (b) gravity force
- (c) sound energy
- (d) light energy

37. When you throw a ball in the air, the gravity will make it moveupward

- (a) Upward
- (b) Forward
- (c) Downward
- (d) backward





Question 2

Put (true) or (false) answers

Concept 1.3

1)	Light travels in straight lines	✓
2)	The ear is the sense organ responsible for seeing objects	✗
3)	The sun and the moon are sources of light	✗
4)	Objects can be seen due to the absorption of light	✗
5)	Smooth surfaces reflect light better than rough surfaces	✓
6)	Nocturnal animals have larger eyes than humans.	✓
7)	Rough objects reflect light better than smooth ones	✗
8)	The moon is not a source of light	✓
9)	Shadow formed when light hits transparent object	✗
10)	Wood is a transparent object that allows light to pass through it	✗
11)	Opaque materials don't allow light to pass through	✓
12)	Speaking, writing are ways to communicate with people	✓
13)	Human use light to communicate such as using traffic light	✓
14)	Human can see in dim light as well as in bright light if his eyes contain a mirror-like membrane	✗
15)	Different languages have similar codes.	✗
16)	A cell phone is a device that is used in communication between animals.	✗





Concept 2.1

17)	Objects do not move if no force affects them	x
18)	The body is static when it moves from one place to another	x
19)	The engine of the jet plane is weaker than the engine of the car	x
20)	The movement of the planets can be seen in the sky	x
21)	To open or close a door, we have to push or pull it	✓
22)	Putting on a pair of socks needs a pushing force	x
23)	You need energy to push a car forward or backward	✓
24)	A car can move faster than a bicycle	✓
25)	A normal truck can move faster than a jet airplane	x
26)	The three jet engines in the Shockwave truck allow it to fly	x
27)	If the two teams in the tug-of-war game are pulling the rope with equal forces, the rope will move toward one of the two teams	x
28)	Unbalanced forces cause a change in the object position	✓
29)	If one team in the tug-of-war game pulls the rope with a greater force, the rope will move toward the team with the smaller force	x
30)	Sometimes it is easy to observe the force that stops an object	✓
31)	When a car runs out of fuel on a flat road, its speed increases gradually until it stops.	x
32)	Friction force always slows down or stops the motion of moving objects	✓





33)	The motion of an object on the ground is affected by a friction force	✓
34)	Hard push causes an object to travel for a longer distance	✓
35)	If a person moves a table through a distance, there is a work done.	✓
36)	Lifting a book upward needs more energy than pushing a truck	✗
37)	If you try to open a door but you cannot open it, this means that work is done	✗
38)	Hitting a tennis ball needs a pulling force	✗

Question 3

Complete the following sentences

Concept 1.3

1)	(Wood) is an opaque object
2)	(water) Is a transparent object
3)	All cats have a (mirror-like-membrane) at the back of their eyes
4)	Any object that give off its own light is called (source of light)
5)	The eyes of fishing cat have a mirror-like membrane bounces off the light , and this is considered as a (structural) a daptation
6)	The (brain) Is the main control center in humans and animals bodies , while (eyes) Are considered the organ of sight in their bodies
7)	Light travels in (straight) Lines
8)	(fire) And (candles) are sources of light
9)	The eye pupil of the owl and fishing cats is (wider) Than the eye pupil of human
10)	Smooth surfaces reflect light in (one) direction
11)	Rough materials reflect light (different) than smooth materials





12)	(moon) is not considered as a natural source of light
13)	Hand signals are a type of (communication)
14)	Fire flies communicate with each other through (light)
15)	Light is produced as a result of (reactions) inside the body of the fireflies
16)	Fireflies use the sense of (sight) to communicate

Concept 2.1

17)	The body whose position does not change is in a (Static) state.
18)	(Force) causes the movement of static bodies.
19)	The fastest truck in the world is the (Shock wave) truck.
20)	Kicking the ball is considered as a (pushing) force.
21)	The SHOCKWAVE truck is stopped by (parachutes)
22)	Opening the door handle is (pulling) force.
23)	The SHOCKWAVE truck supplied with (three) parachutes
24)	The speed of trucks different according to (engine power)
25)	A moving object is acted by(Unbalanced) forces while the body at rest is acted by (balanced) force
26)	When playing pulling a rope game , if each team pulls the rope with equal force , the forces are (balanced)
27)	To move anything from one place to another you need to (pull) It , or (push) it
28)	In the shockwave truck, engineers put three (jet engines) in it to increase it speed , and they installed three (parachutes) To stop it





29)	The idea of stopping the shockwave truck is the same idea of stopping a moving (rocket)
30)	It is the ability to do work and it can change from one form to another is called (Energy)
31)	There are two forces that affect on moving object which are (pushing) and pulling forces
32)	Any object moves from its place when the forces acting on it are (unbalanced)
33)	The force that pulls things down to the ground is (gravity)
34)	Friction is a force that (opposite) The motion direction

Question 4

Write what the following sentence indicate

Concept 1.3

1)	The organ affected by light and responsible for vision	<u>Eye</u>
2)	Materials that allow light to pass through them	<u>Transparent</u>
3)	Objects through which light is emitted	<u>Sources of light</u>
4)	Materials that cannot be seen through	<u>Opaque</u>
5)	A pattern that have meaning	<u>Code</u>
6)	A device you can use to see in the dark	<u>Night vision goggles</u>
7)	A typer of wild cats , that have eyes glow at nights	<u>Fishing cat</u>
8)	A body that appears lighted in the sky ,but it is not considered as a source of light	<u>Moon</u>
9)	They are materials reflects the light in one direction	<u>Smooth</u>
10)	They are materials reflects the light in difference directions	<u>Rough materials</u>





11)	The object which allows light to pass through it	<u>Transparent object</u>
12)	It is a visible form of energy that travels in form of waves	<u>Light</u>
13)	The structural adaptation that gives fishing cat an excellent night vision	<u>Mirror-like-membrane</u>
14)	Sense organ that can detect sound energy	<u>Ears</u>
15)	Sense organa that can detect light energy	<u>eyes</u>

Concept 2.1

16)	A force that you males to move an object toward you	<u>Pulling force</u>
17)	A force that you make to move an object away from you	<u>Pushing force</u>
18)	One of the fastest and most powerful trucks in the world	<u>Shockwave truck</u>
19)	It is a push or pull that is applied to an object cause it to change its position	<u>Force</u>
20)	A change in the position of an object relative to fixed strating point	<u>Motion</u>
21)	The force the pulls objects down toward the earth	<u>Gravity</u>
22)	It is a force that is exerted when objects rub against each other	<u>Friction</u>
23)	It is a force that slow down the motion of moving objects	<u>Friction</u>
24)	The force that is used in tug-of war game	<u>Pulling force</u>
25)	It is force that is exerted when objects rub against each other	<u>Friction</u>

Question 5

Give reason for the following

Concept 1.3





- 1) Fishing cat eyes glow in the dark
 - because it has a mirror-like membrane at the back of its eyes which reflect light
- 2) Nocturnal animals can see better at night.
 - Because of mirror-like membrane at the back of their eyes that reflect light falls on it
- 3) Sun is considered a source of light
 - Because it emits light
- 4) Moon is not considered as a source of light
 - Because it reflects sun light.
- 5) We can see objects when light fall on it
 - Because of light reflection
- 6) The moon is not a source of light.
 - Because.it doesn't emit its own light it reflects the sunlight
- 7) Humans sometimes use codes.
 - To communicate with each other
- 8) Fireflies produce different pattern of flash light
 - To warn off from predators or attract a mate (To communicate with each other)
- 9) Fireflies produce a chemical reaction inside their bodies
 - To light up and communicate with each other
- 10) You can see an object placed behind a glass cup
 - Because, glass cup is transparent object that allow light rays pass through it
- 11) The car starts moving when the gases come out of the fire extinguishers.?
 - Because, when air release from fire extinguishers moves backward that make cart move forward
- 12) The Shockwave truck is faster than the normal truck
 - Because the Shockwave truck has three jet engines
- 13) Engineers use parachutes in the Shockwave truck designs
 - To help slow down the Shockwave truck quickly
- 14) When you kick a ball laying on the ground, it moves
 - Due to the pushing force of your leg that acts on it.
- 15) When two equal pushing forces act on an object in opposite directions, the object doesn't move
 - Because the two forces are balanced, so the object doesn't move
- 16) If you let a pen out of your hand, it falls to the ground.



Concept 2.1





- Due to the pulling force of the gravity that pulls the pen down toward the Earth
- 17) When your friend catches a ball that is thrown in the air, the motion of the ball is stopped.
- Due to the pushing force of his hand against the ball movement that makes it stops
- 18) When your toy car crashes into a wall, it will stop moving
- Because the wall applies a force to the car with the same amount of the force that pushes the car toward the wall
- 19) When you stop pedalling during the movement of your bicycle, it slows down until it stops.
- Due to the friction force between the bicycle tires and the road that acts in the opposite direction of the bicycle movement.
- 20) If you push two similar toy cars on the same ground, one of them may travel for a longer distance than the other.
- Due to the difference in the forces that act on each of them
- 21) If the same force acts on a small car and a truck, the small car will travel for a longer distance than the truck.
- Because the small object travels faster than the bigger object when the same amount of force acts on them.

Question 6

What happen when

Concept 1.3

1. Light fall on a rough surface such as wood
 - The light will reflect in different direction
2. Light fall on a smooth surface such as mirror
 - The light will reflect in one direction and same angle
3. The backcountry hikers do not have mirrors
 - They cannot attract the attention of rescue helicopters
4. The codes have no meaning
 - The brain cannot transmit information
5. Fireflies did not emit flashes
 - It will not communicate with each other
6. The fishing cat eye don't have mirror-like membrane
 - They cannot see at night
7. Light fall on transparent objects
 - Light will pass through it and you can see objects through it
8. When firefly wants to attract a mate to reproduce
 - It produce chemical reactions inside it's body to light up
9. The moon can't reflect sunlight





- The moon appears dark at the sky

10. Increase the number of fire extinguishers on the car?

- The speed of car increase and distance increase

11. The moon can't reflect sunlight

- The eye send message to brain and brain process information to stop walking

12. The traffic light becomes red while you are going to cross the road

- The ball start to move

13. You kick a stopped ball on the ground

- It's speed will increase

14. Engineers placed Jet engines inside a normal truck instead of its normal engine

- It will decrease its speed until it stop

15. The shockwave driver opens the parachutes

- The rope will not move

16. The pulling forces of the two teams are equal in the tug-of-war game

- Its speed will decrease until it stop (It cannot move)

17. A car runs out of fuel on a road

- the rope will not move

18. A forces that are acting on the rope of tug-of-war game are balanced

- The rope will not move

Concept 2.1

Question 7

Vairous questions

Concept 1.3

1) Explain how bats communicate with each other?

- they make high-pitched sound and depend on the echo of it

2) Mention an example of behavioral adaptation in Fireflies

- Change its pattern of flashing

3) Mention one benefit of flashes emitted by fireflies.

- It help it to find amate and communicate

4) Mention two examples of codes used by humans in their daily life.

- Language
- face expressions

5) Look at the following figures, then answer the questions below:



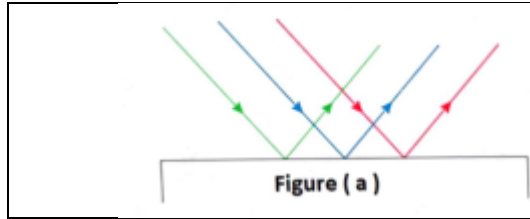
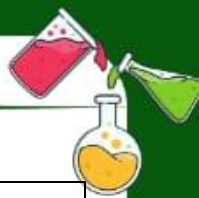


Figure (a)

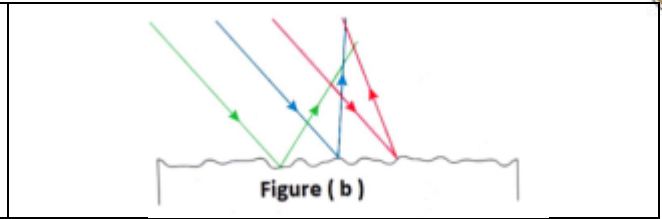


Figure (b)

C) Which Surface represents reflection of light rays from mirror? **Figure (a)**

D) Light travel in **straight** lines

1) Look at the following pictures, then complete the following sentences

Concept 2.1

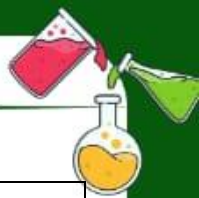
	
Picture (1): Normal truck	Picture (2): Jet airplane
1. The engine of picture (<u>2</u>) is much powerful than the engine of picture (<u>1</u>)	
2. When the engines of picture (<u>2</u>) are placed in the picture (<u>1</u>) it will turn into the Shockwave truck.	
3. The engines that are used in picture (<u>2</u>) are the same engines that are used in the Shockwave truck.	



أنا بس حببت أفكر
إنك عدت باوقات
كتير اصعب من كذا
وعدت على خير،
ودي كمان هتعدى
على خير إتضمن
ومتقلقش كله هيبقى
كويس.

Write the type of force that is used in each of the following situations

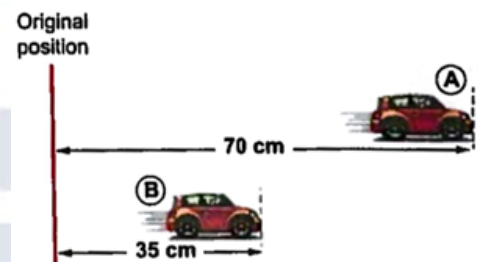




	
1. pushing forces	2. pulling forces
	
3. pulling forces	4. pushing forces

1) The following figure shows two similar toy cars are pushed to move on the same floor, study the figure then answer the questions below

1. Which of these two cars is affected by a greater force ?



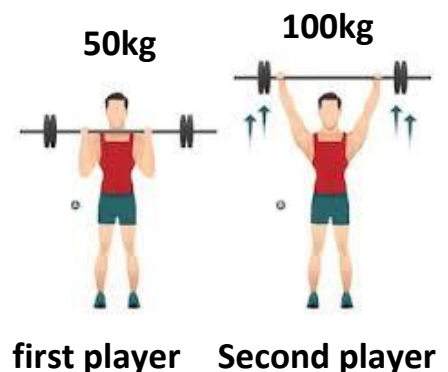
(Give a reason for your answer)

- Car (A), because it travels a longer distance than car (B)

2) In the opposite figure, which of the two players does more work to raise the weights ?

(Give a reason for your answer)

- The second player, because he raises a weight heavier than the first player, so he needs larger amount of energy to do more work





نوقعات النقية

MODEL EXAM (1)

1) CHOOSE THE CORRECT ANSWER

1. Light travel inlines
 (a) **Zigzag** (b) **Straight** (c) **circular**
2. Which of the following materials reflect light best ?
 (a) **Wood** (b) **Cloth** (c) **Mirror**

2) PUT (✓) OR (×) IN THE FRONT IN EACH OF THE FOLLOWING

1)	Object can be seen due to the absorption of light	×
2)	The engine of the jet plane is weaker than the engine of car	×

3) WRITE SCIENTIFIC TERM

1)	The force that make object move away from you	<u>Pulling force</u>
2)	Animals communicate with with each other by flashing (lighting)	<u>Firefly beetles</u>

4) GIVE REASON FOR

1. The moon is not considered a source of light
 • **Because , the moon doesn't emit its own light , it reflects the sunlight fall on it**
2. The body does not move when it is exerted by balanced force ?
 • **Because , there area two equal forces and it in opposite direction so body not move**

5) MENTION ONE EXAMPLE FROM EACH OF THE FOLLOWING

1. Pushing and pulling force
 • **Pushing —————→ push the door , pulling —————→ pull a toy car**
2. Codes used by human in daily life
 • **Face expressions**
 • **Language**
 • **Writeing**





MODEL EXAM (2)

1) CHOOSE THE CORRECT ANSWER

1. From the opaque objects
 - (a) Carton
 - (b) Glass
2. All of the following is considered pulling force , except
 - (a) Kicking a ball
 - (b) Pulling the rope
 - (c) Opening the desk's drawer
 - (d) Dragging a car toy

2) PUT (✓) OR (×) IN THE FRONT IN EACH OF THE FOLLOWING

1)	When a pen falls down from your hand, then the acting force is the gravity force	✓
2)	The ear is the sense organ which is responsible for seeing objects	×

3) WRITE SCIENTIFIC TERM

1)	Something that emits its own light	<u>Source of light</u>
2)	One of the fastest and powerful trucks in the world	<u>Shockwave truck</u>

4) GIVE REASON FOR

1. The fishing cat's eye seem to glow at the dark
 - Because , it has a mirror – like - membrane
2. If you let a pen out of your hand, it falls to the ground
 - Due to gravity

5) MENTION ONE EXAMPLE FROM EACH OF THE FOLLOWING

1. Example of source of light
 - The sun
2. Code or way of communication firefly beetles use
 - Lighting (flashing)



حمل الآن

مجاناً وحصرياً

المراجعة رقم (6)

اختبار شهر نوفمبر



تجميع الأسئلة المقالية من التيمات

"Give Reason"

"Unit 1 Concept 3"

1 - All Cats Can see in the dark.

↳ Because they have mirror like membrane at the back of its eyes which reflects the light.

2 - Human body has a shadow.

↳ Because it is opaque object which doesn't allow light to pass through.

3 - Chemical reaction occurs inside the body of fireflies.

↳ To light up and to communicate with each other.

4 - Travellers used mirror. > i
Travellers are make sure to have mirror on their trips.

نفس الاجابه :-

↳ To attract helicopters for help.

5 - Fireflies emit flash light >
Fireflies produce bright flash.

نفس الاجابه

↳ to attract a mate, to warn off from predators and to communicate with each other.

6 - Humans sometime use Codes >
Codes are very important in human life.

نفس الاجابه

↳ To communicate with each other and to transmit information

(2)

7- The moon is not considered a source of light.

↳ Because it reflects sunlight.

8- The glass is transparent object.

↳ Because it allows light to pass through it.

"What happen if ?"

1- Humans have large eyes with large pupils.

↳ They will have excellent night vision and more light can enter the eyes to see in the dark.

2- Light falls on rough surface.

↳ it will reflect in different directions.

3- Fireflies emit flashes at regular intervals. فترات منتظمة

↳ They can communicate with each other.

4- languages didn't exist in different countries.

↳ people can't communicate with each other.

5- predators close to fireflies.

↳ they use their wings to make different flash patterns to warn off others from predators.

6- A group of fireflies meet another group of fireflies.

↳ they will change their flash pattern to match the flash pattern of another group to communicate.

EXplain اشرح

1-How Can We see things.

- • Light falls on objects then bounce off to reach our eyes.

2-How fireflies communicate with each other.

- they produce chemical reaction inside the body to light up so they can communicate.

3-How human use code or signals to transmit information.

- Human use code to transmit information such as:-
- thumb up = good.
 - thumb down = bad.
 - Traffic Light = stop or go.
 - Expression of face = know feelings.
 - Writing = know meaning of words.
 - Light house = Tell sailors where they are.

4-The importance of membrane in cat eyes.

- it helps cat to have excellent night vision to see and hunt at night.

5-Compare between sun and moon as a source of light.

- Sun is a source of light. moon is not source of light but reflect sunlight.

6-Compare between light fall on shiny surface and painted wall.

- on shiny surface, light will reflect in one direction.

on painted wall, light will reflect in different directions.

7-The importance of codes in our life.

- to transmit information and to communicate with each other.

(4)

Unit 2 Concept 1 Starting and stopping

* Give reason *

1. The shockwave truck is the fastest truck in the world.

↳ Because it has 3 jet engines.

2. The speed of jet plane is greater than the speed of truck.

↳ Because it has jet engine which is more powerful.

3. The car begins to move when the gases come out from fire extinguisher fixed on it.

↳ Because when the air moves backward, the cart moves forward.

4. The object doesn't move when it is affected by balanced force.

↳ Because it is affected by equal force in opposite directions.

5. The ball on the ground doesn't move from itself.

↳ Because it needs force to make it to move.

6. The car stops moving when it collides with concrete bumper.
حادث خرسانی

↳ Because the bumper applied a force on a car equal the force that pushes the car to the bumper.

7. When a ball hits the floor, it stops after a while.

↳ Because of the friction force between the ball and the floor in opposite direction.

5

What happen if ?

1- The shockwave is not provide with umbrellas $\leftarrow$ (Parachute)

$\hookrightarrow$ The driver of shockwave truck can't stop it.

2- A suitable force acts on a static object. جبر ثابت

$\hookrightarrow$ the static object will move

3- Increase the number of fire extinguisher fixed to the vehicle.

$\hookrightarrow$ the speed will increase and it will move long distance.

4- An unbalanced force acts on an object.

$\hookrightarrow$ the object will move.

5- The static object when it is affected by balanced force.

$\hookrightarrow$ the object will not move and still static.

اسئلة متنوعة

1- Compare between pushing and pulling force with examples.

$\hookrightarrow$ Pushing force; - is the force that you make to move object away from you.

ex:- kicking the ball.

$\hookrightarrow$ Pulling force; - is the force that you make to move object towards you.

ex:- pulling the bag.

2- Mention an example of movement that can be seen easily and that can't be seen.

$\hookrightarrow$ Can be seen; - Walking person.

Can't be seen; - rotation of Earth around the Sun.

⑥

3- Explain the state of body when it is affected by balanced and unbalanced force.

→ Balanced force: - the body will not move.

→ Unbalanced force: - the body will move.

4- Explain the difference between balanced and unbalanced force through Tug of War game.

→ Balanced force: - the rope will not move.

→ Unbalanced force: - the rope will move to the greater force.

5- What are the conditions that must be existed for the body to be in motion?

→ The body must be affected by unbalanced force to move and change its position.

6- When you sit on a chair without moving. What is the name of the force that affects you down.

→ The gravity pulling force.

7- What is the force that affects the movement or stopping car?

→ The friction force.

Scientific Term Concept 1.3

1. A type of animal whose eyes helps it to find its prey in the dark (Fishing Cat).
2. Objects which light doesn't pass through (opaque object).
3. Organisms that use their wings to emit flashes of light (Fireflies beetles).
4. Pattern with meaning. (Code).
5. Thumb-up or thumb-down. (Code).

دى بس الذسلة الموجودة فى البقات
بس ميعا فى حاجات تانية لدرم
تكون عارنوا علشان كده
لدرم تراجع صفحه الترفيقات

8. The amount of energy required to move object a distance through a force acting on it (Work).

Scientific Term Concept 2.1

1. The force that pull objects downwards in the direction of the Earth. (gravity pulling force).
2. Changing the position of an object relative to fixed point. (Motion).
3. The movement of the body from place to another (motion).
4. The force that arises between 2 objects in contact and affect in opposite direction of movement (Friction force).
5. A force that causes objects approach in your direction. (pulling force).
6. The ability to do work (energy).
7. The influence which change energy to be able to do work (Force).

Definitions of Concept 3

1- Light:-

it is the visible form of energy that can be seen.

7- Rough surface

It is the surface that reflects light in different directions.

2- Night Vision goggles:-

it is a device that helps human to see in the dark.

8- Code:-

it is the pattern that has meaning.

3- Source of Light:-

it is something that emits its own light.

4- Transparent objects:-

They are objects that allow light to pass through.

5- Opaque objects:-

They are objects that don't allow light to pass through.

6- Smooth surface:-

It is the surface that reflects light in one direction.

(9)

Definitions & units / Concept 1

1- Force:-

It is push or pull that applied on an object to change its position.

2- Pushing force:-

It is a force you make to move object away from you.

3- Pulling force:-

It is a force you make to move object towards you.

4- Shockwave truck:-

It is the fastest and powerful truck in the world.

5- Motion:-

It is any change in the position of an object relative to fixed point.

6- Gravity:-

It is the force that pulls objects down to the earth.

7- Friction force:-

It is the force that is exerted when objects rub against each other.

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

